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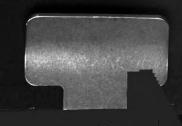
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### THE ENGINEERING WORKS

OF THE

## KISTNA DELTA.

VOLUME II.

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## ENGINEERING WORKS

OF THE

## KISTNA DELTA:

A DESCRIPTIVE AND HISTORICAL ACCOUNT.

COMPILED FOR THE MADRAS GOVERNMENT

BY

GEORGE T. WALCH, M. INST.C. E., Chief Engineer for Irrigation, Madras (Retired).

IN TWO VOLUMES.

VOLUME II.

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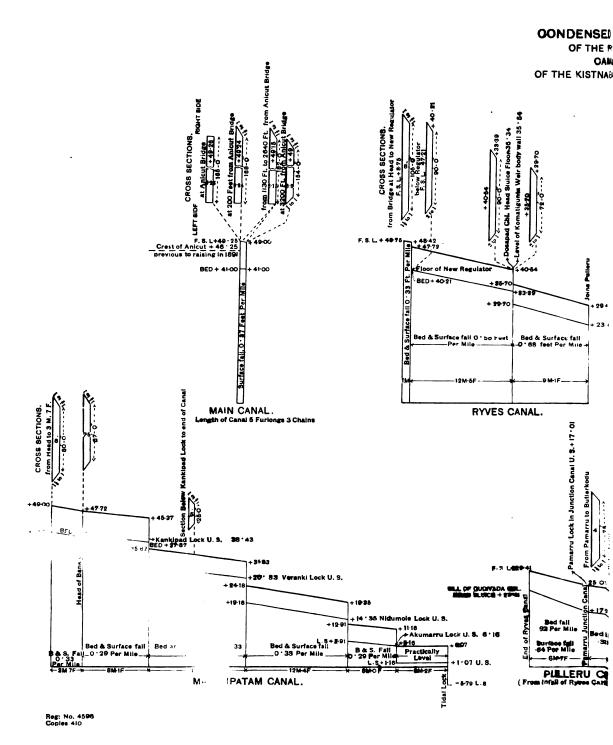
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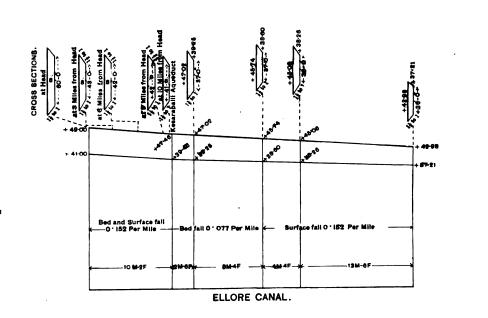
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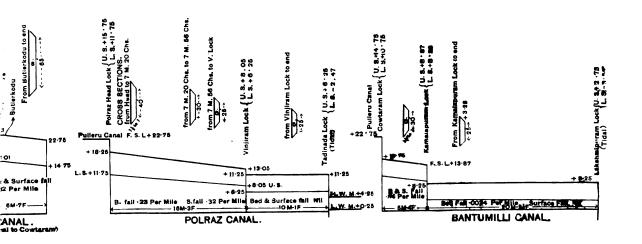
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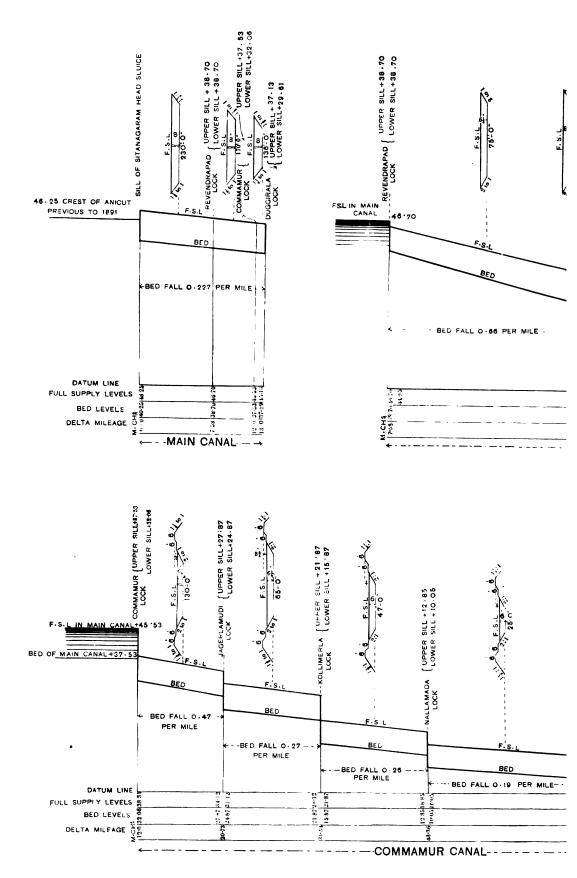
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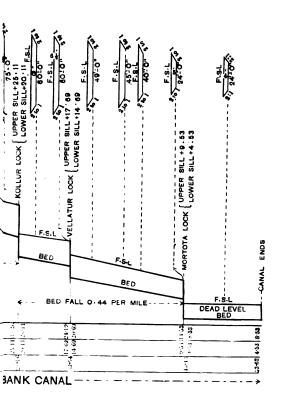
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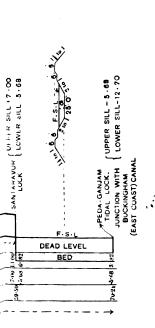


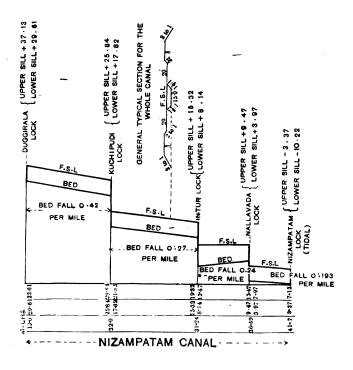
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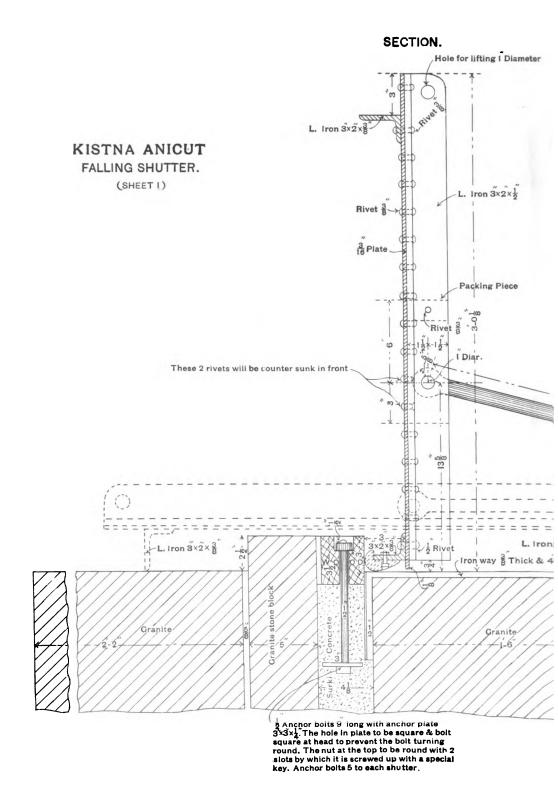




# CONDENSED SECTIONS OF THE PRINCIPAL CANALS OF THE KISTNA WESTERN DELTA.







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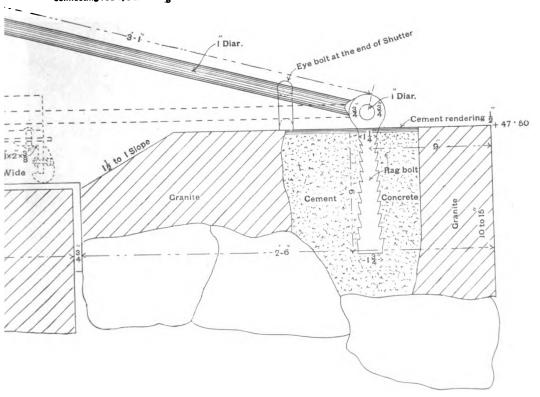
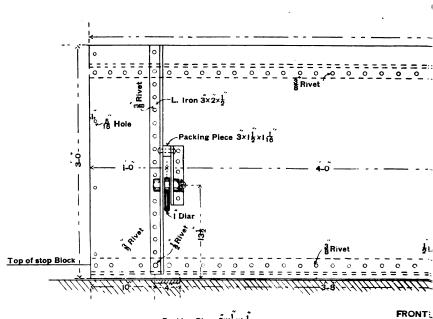
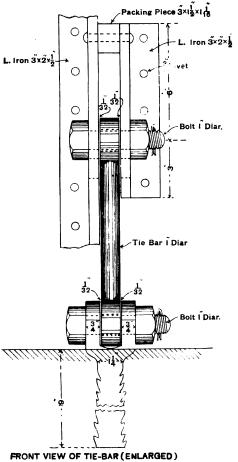


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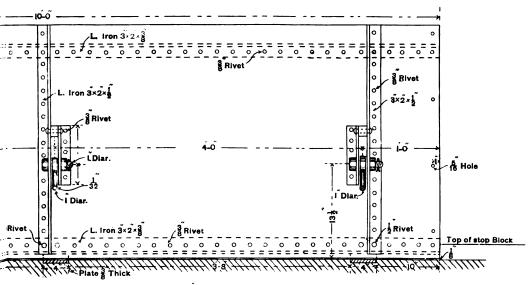


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(SHEET II)



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## SECTION THROUGH THE SOLID CAST IRON SHOE. (ENLARGED)

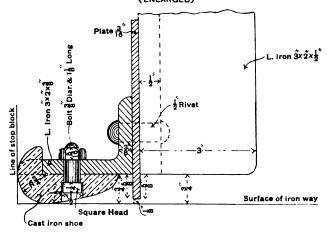
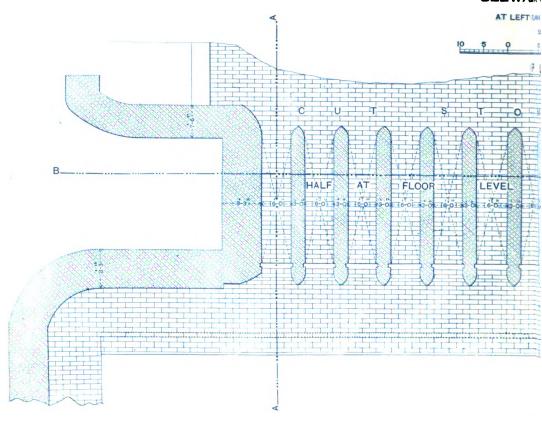
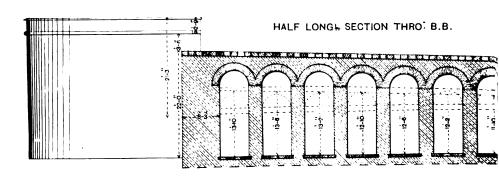
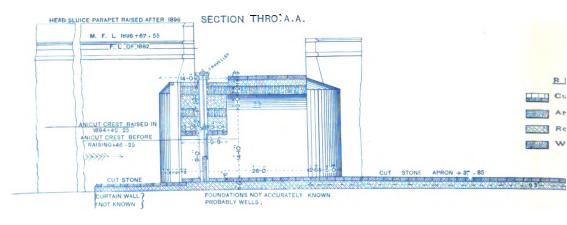


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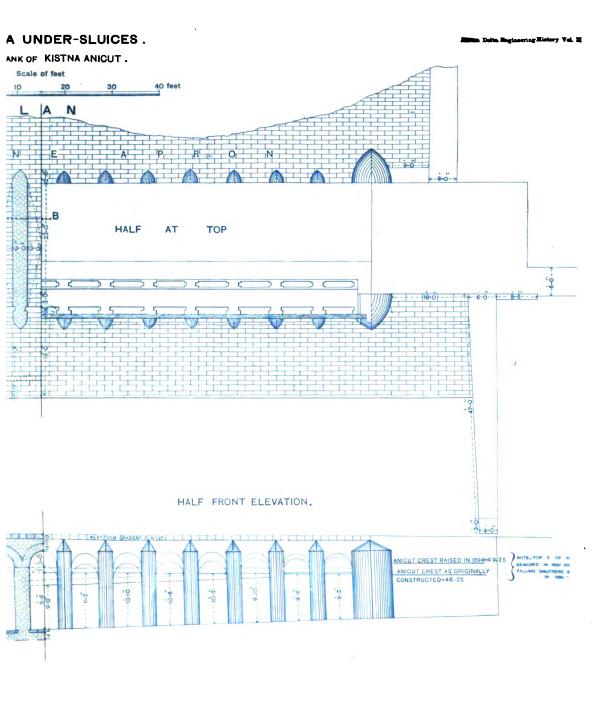
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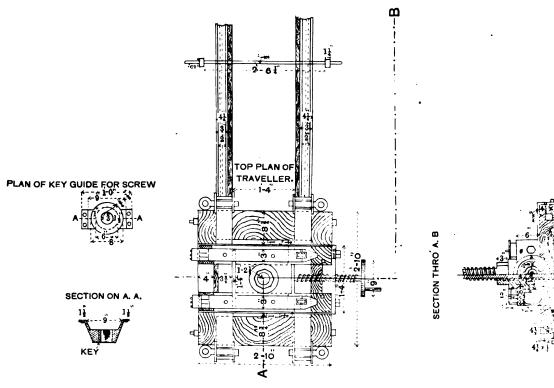
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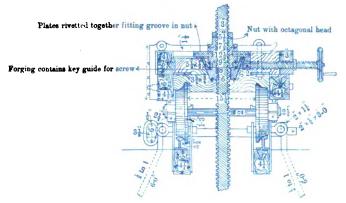


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### CROSS SECTION THRO' TRAVELLER AND SHUTTER



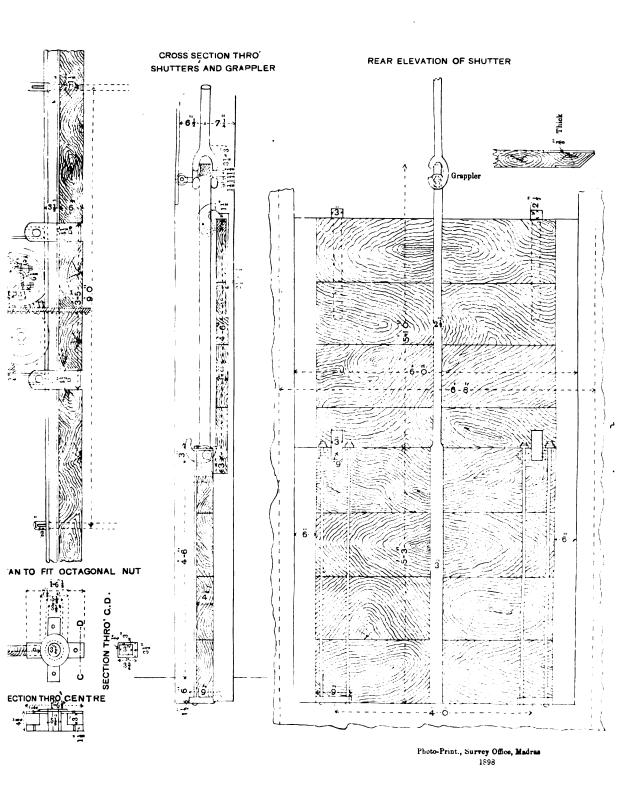
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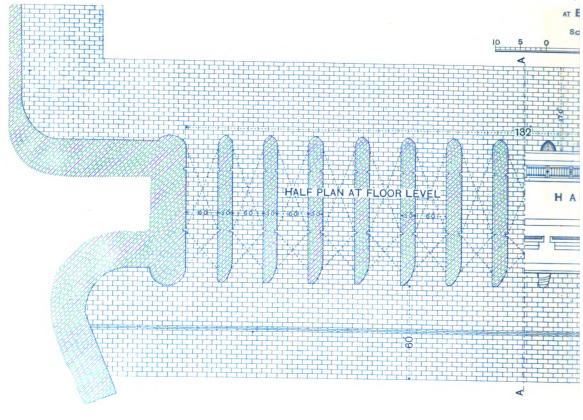
SHUTTERS AND LIFTING GEARING.

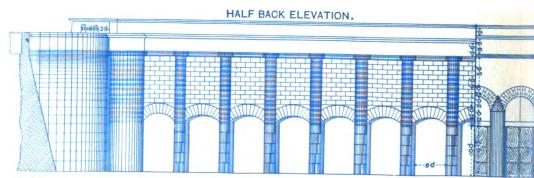




## PLAN OF HEAD SL

OF KISTNA





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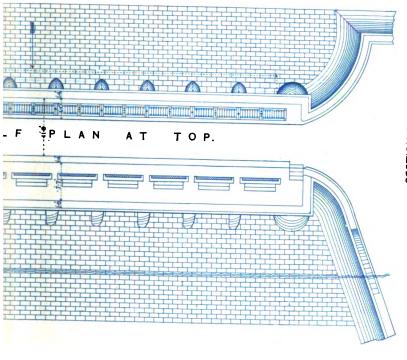
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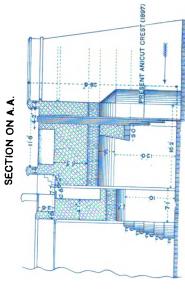
ASTERN DELTA

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## REFERENCE

Rough-Stone in Chunam.

Arch-work Brick in Chunam.

Cutstone work,

Wood-work.

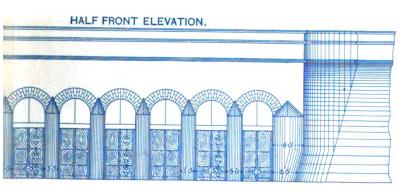
Note. Accurate details of Foundations not on record, but the work is founded on Brick wells sunk in sand. The details of thickness of wings and abutments not known.

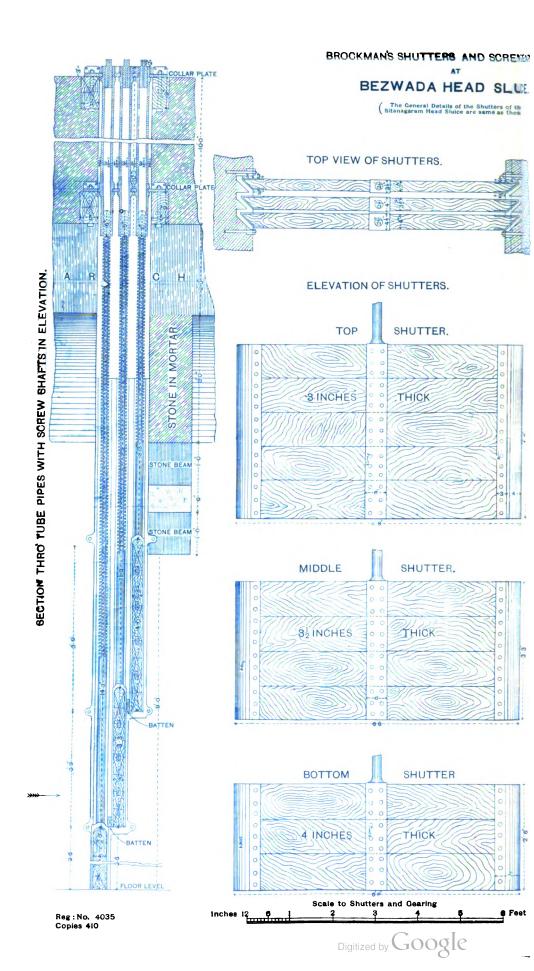
and abutments not known.
The work was built in 1853-55. The second row of abutters (at the rear) were added in 1867,
The screw shutters now in use, were added in 1879-80

added in 1879-80

The details of the screw shutters now in use are shewn on separate drawing.

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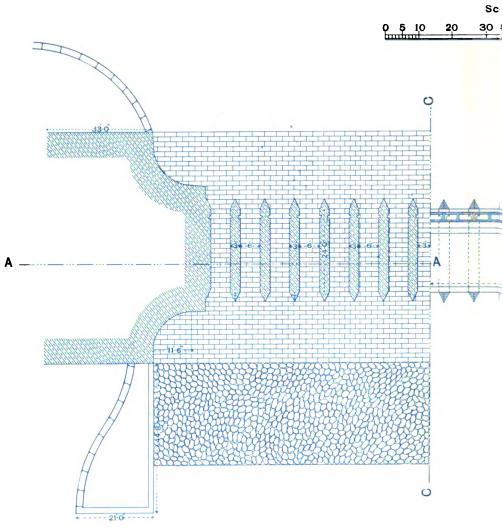
SCREWED TO ENGAGE WITH TOP OF SCREW SHAFT.

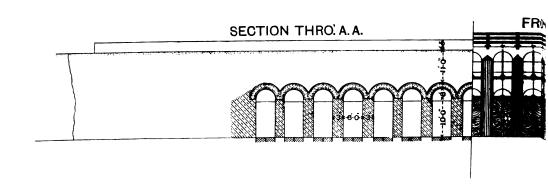
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## OLD HEAD SLU

OF KISTNA Y

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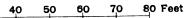
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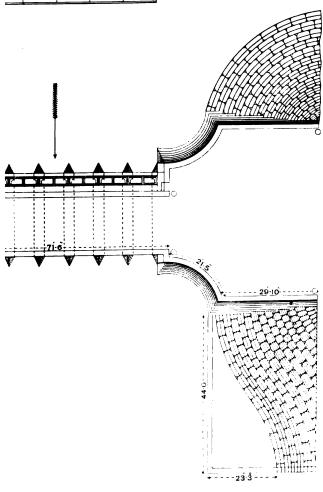
## ICE TO MAIN CANAL

### VESTERN DELTA

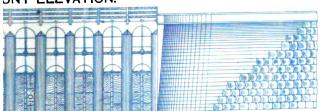
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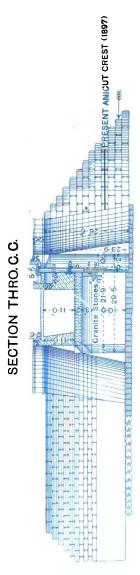
ile of Feet





### ONT ELEVATION.





REFERENCE.

Ro

Rough Stone in Mortar



Arch work (Brick in Mortar)



Cut stone work



Rough Stone



Wood work

Note. Details of foundations not on record.

Dor of thickness of wings and abutments not known.

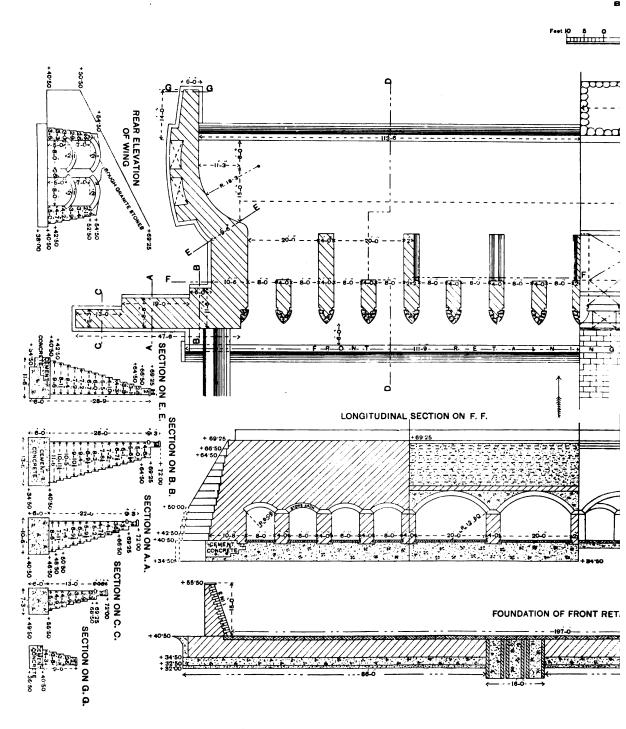
Do. of screw shutters are similar to those at Bezwada head sluice.

The screw shutters now in use, were added in 1879-80.

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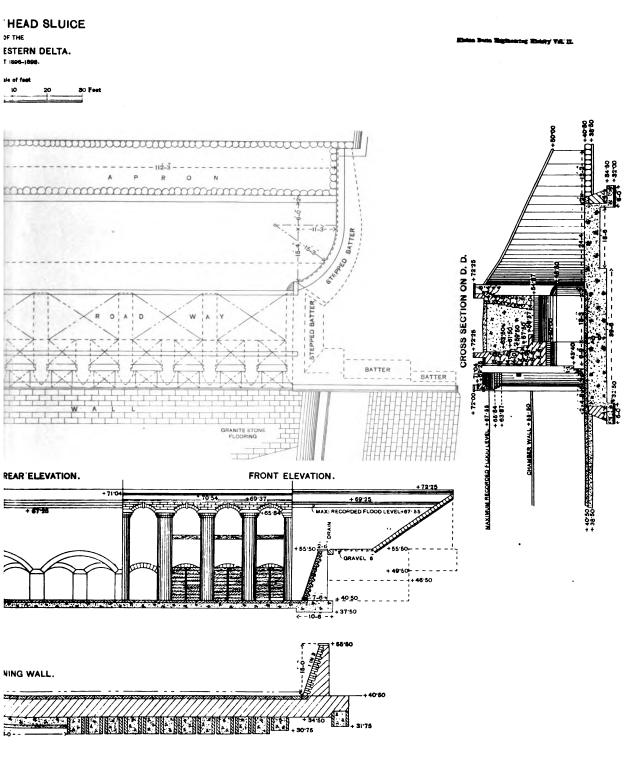
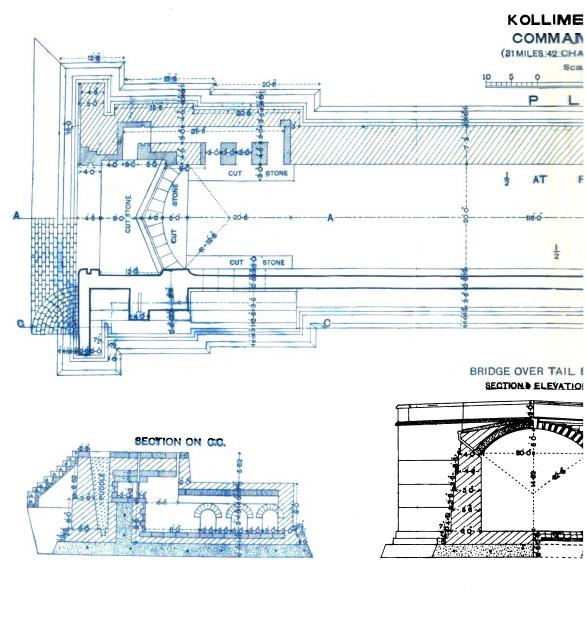
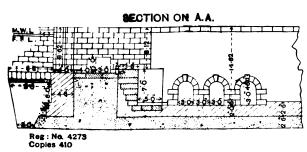
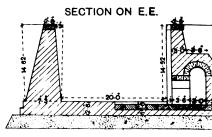
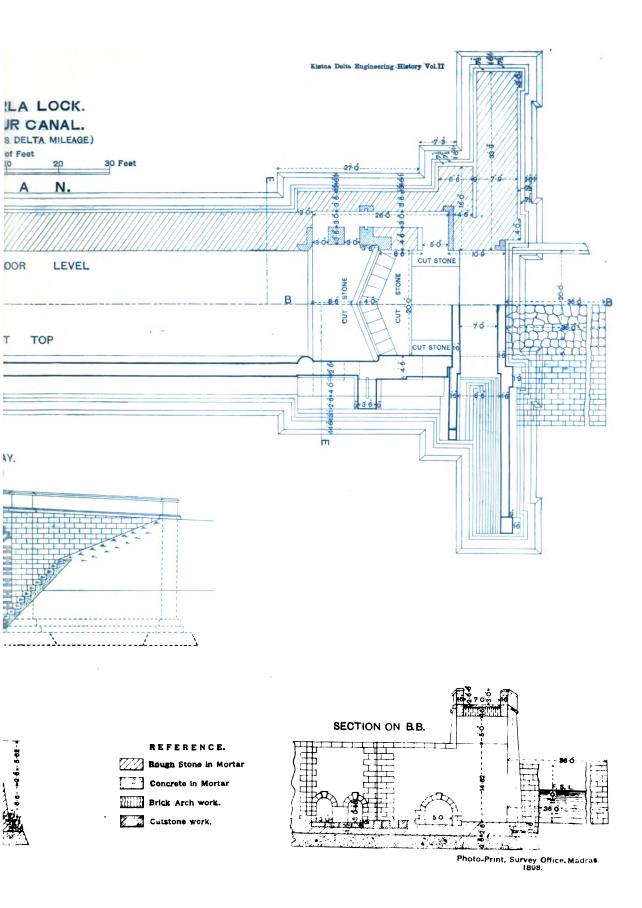


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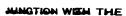


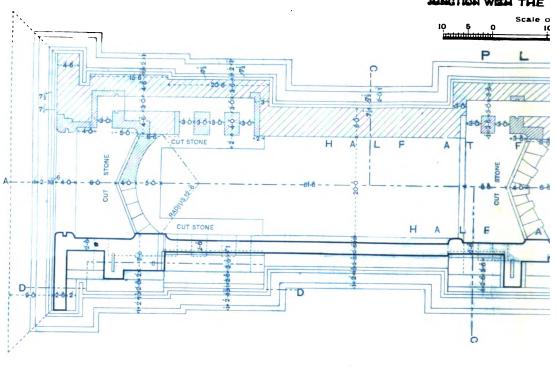




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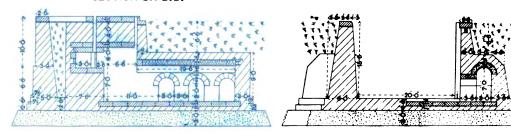
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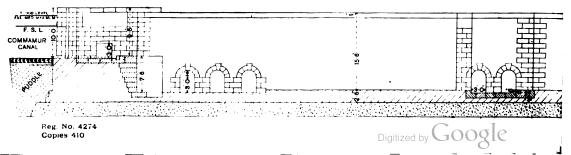
## SECTION ON C.C.



#### SECTION ON F.



#### LONGITUDINAL SECTION



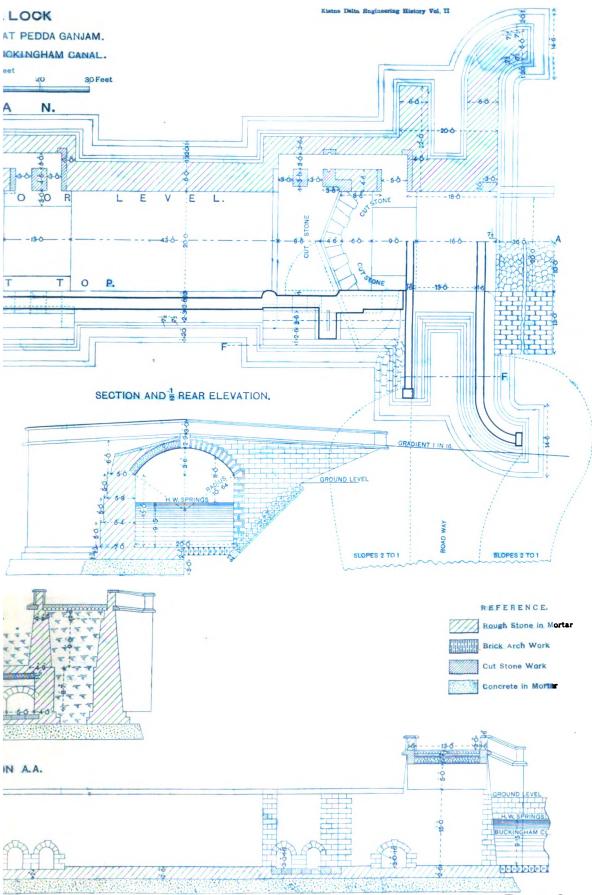
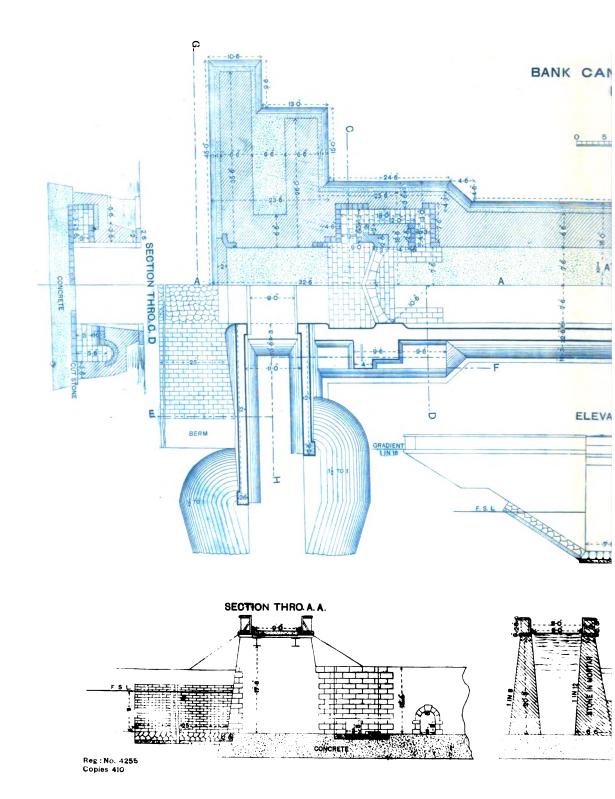


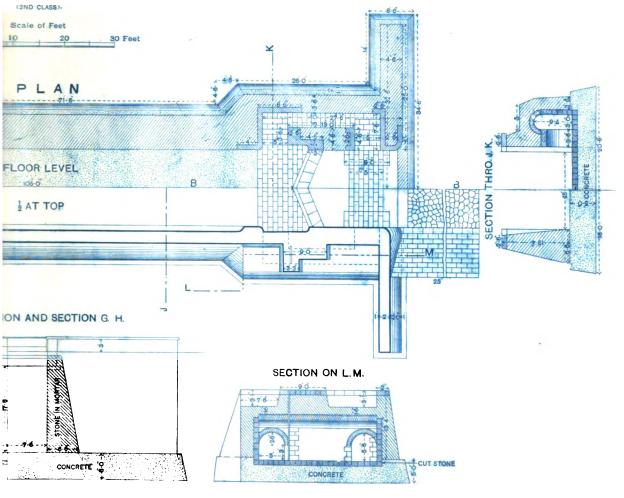
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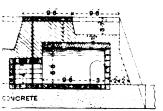


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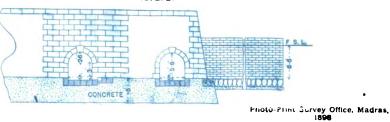
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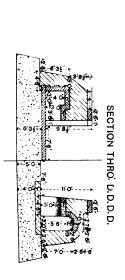


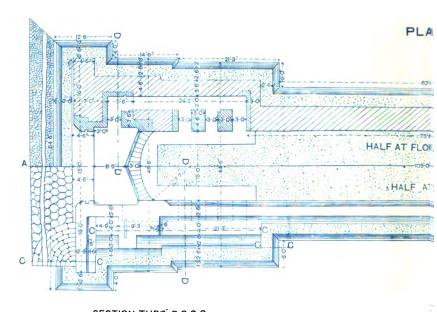
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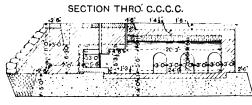


#### VINJIRA! POLRAZ I

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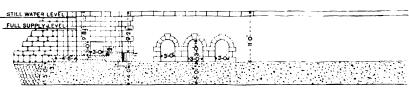




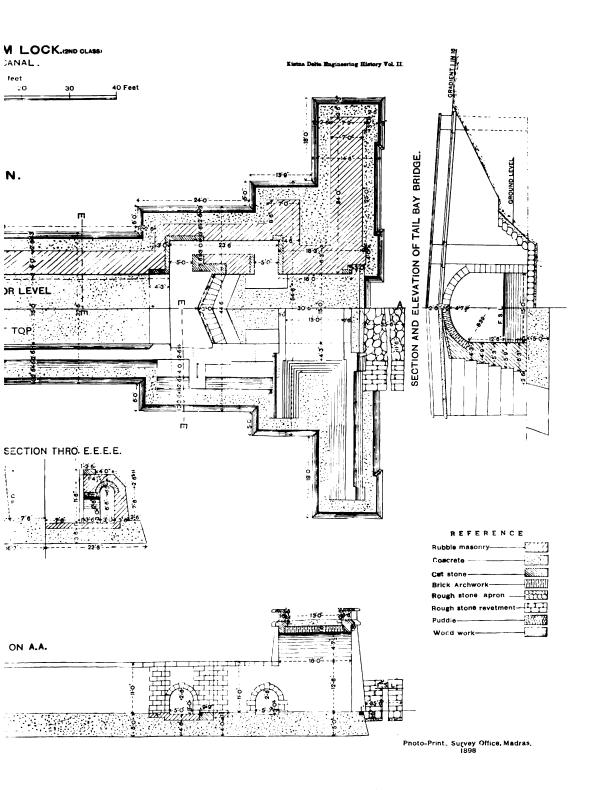




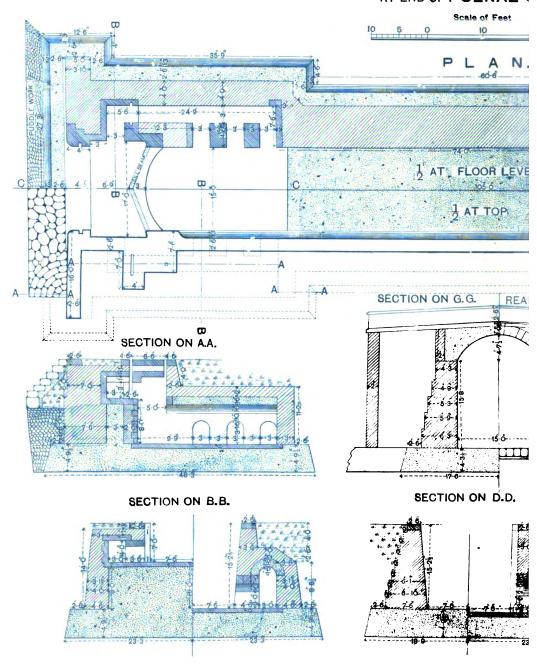
#### LONGITUDINAL SECTION:



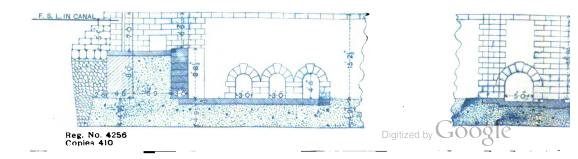
Reg: No. 4507 Copies 410

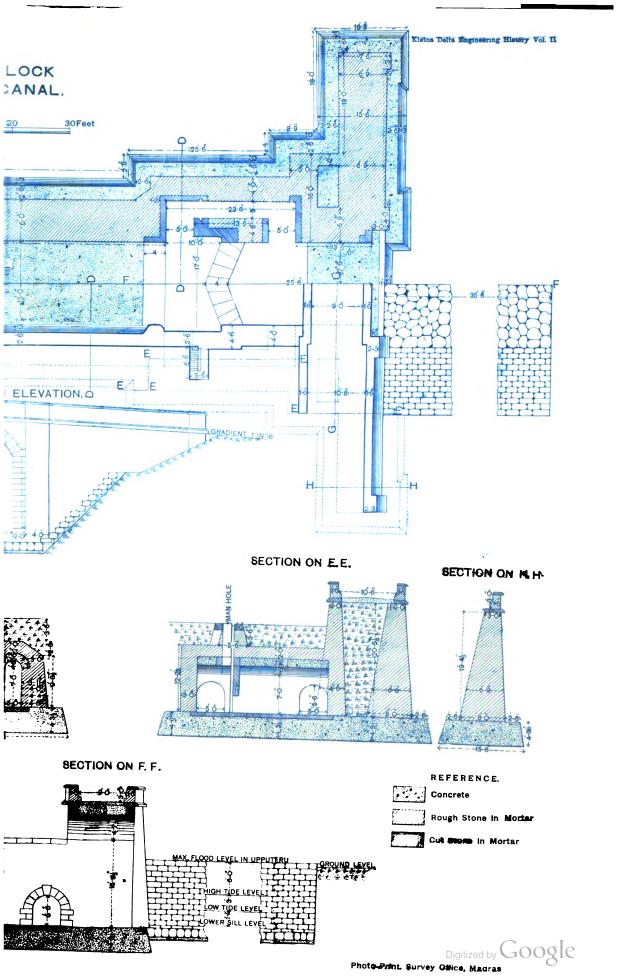


# TADINADA TIDAL AT END OF POLRAZ (



#### SECTION ON C.C.

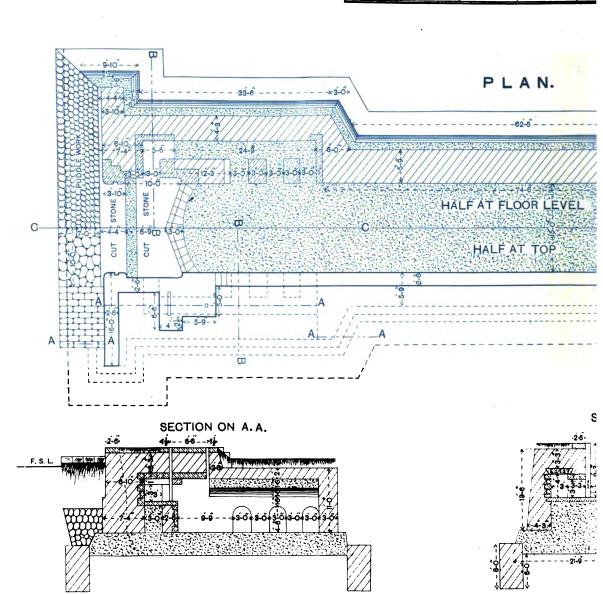




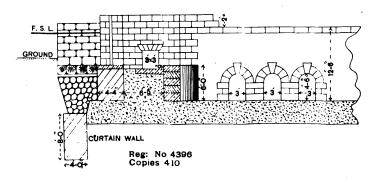
# LAKSHMIPURAM TIDAL LC

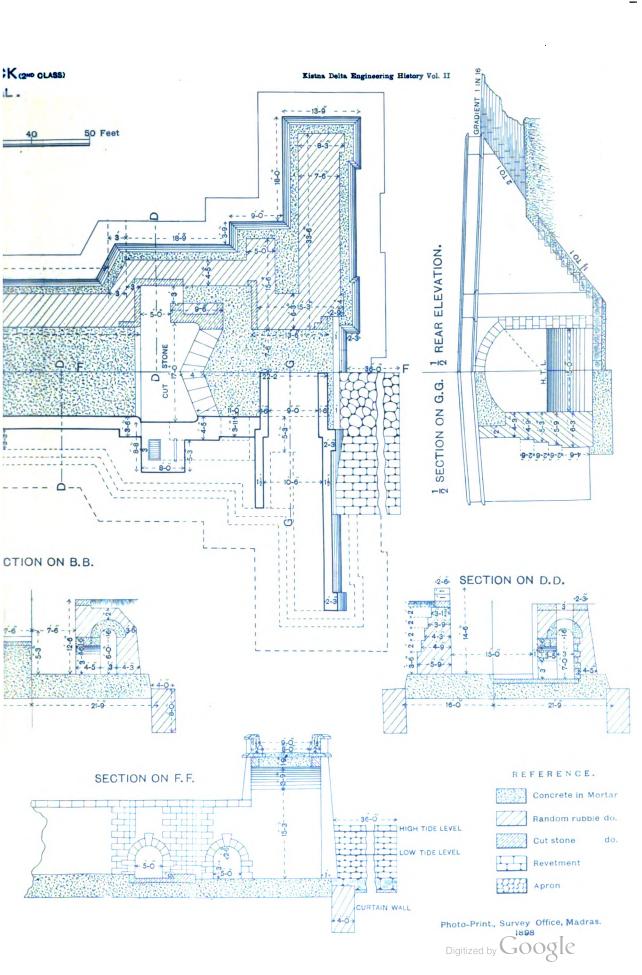
AT END OF BANTUMILLY CAL

Scale of feet



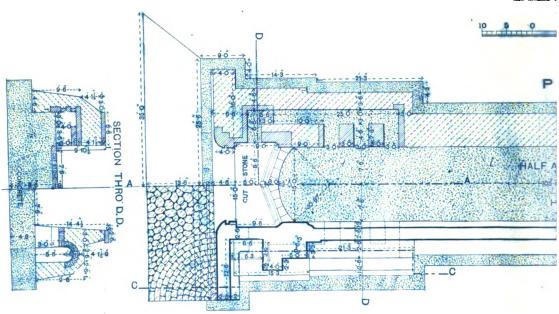
### SECTION ON C.C.

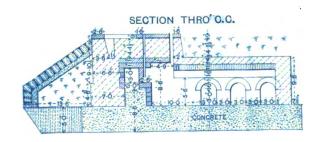


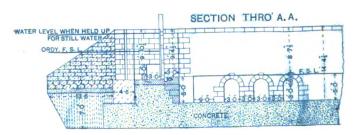


## MOR"

## DIENK CANA









Reg: No 4317

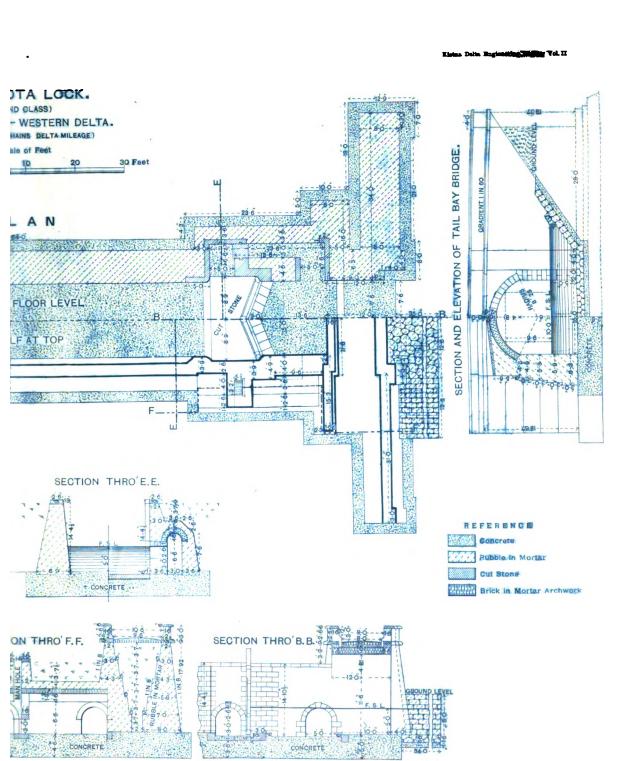
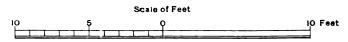
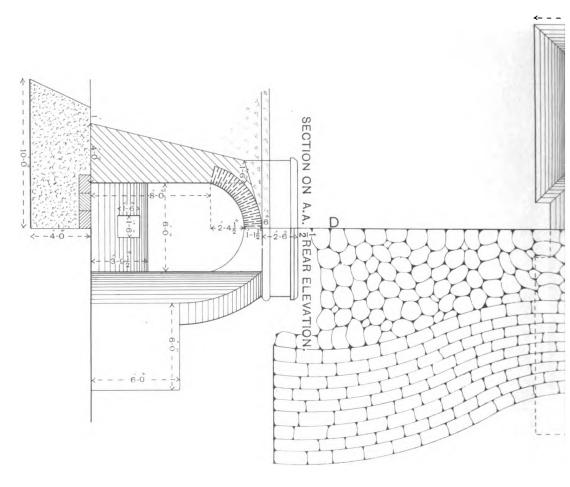


Photo-Print., Survey Office, Madrey, 1898

# VINJIRAM LOCK-WEIR. POLRAZ CANAL.





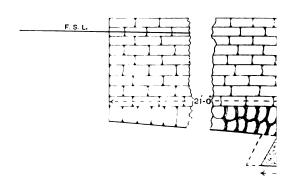


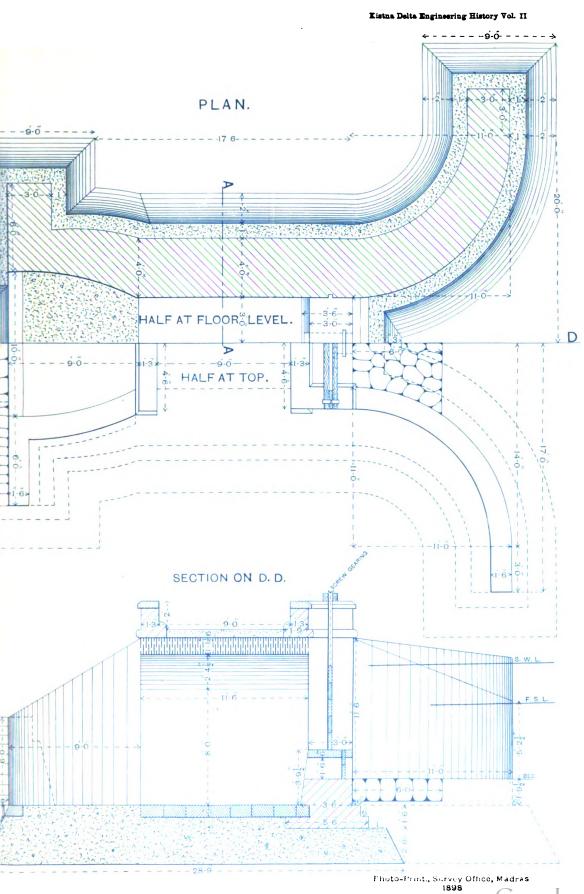


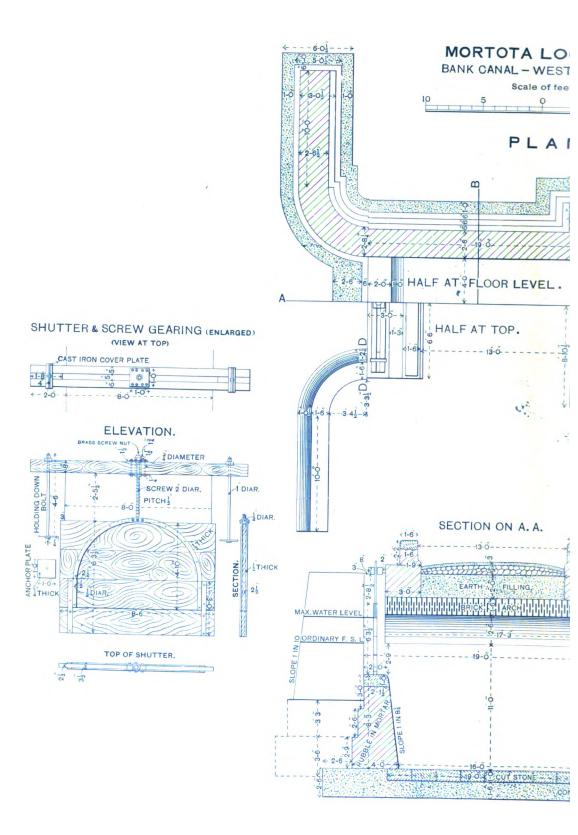
Rough Stone in Mortar

Cutstone

Brick Archwork







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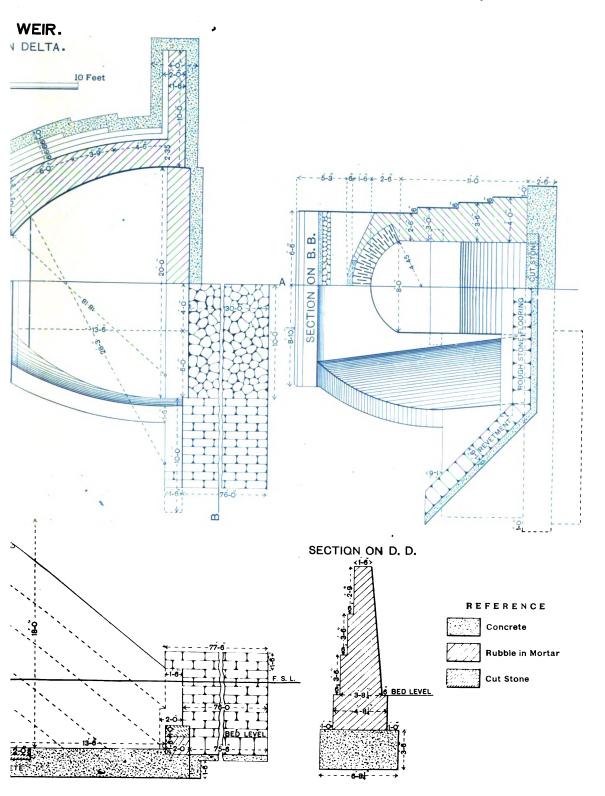
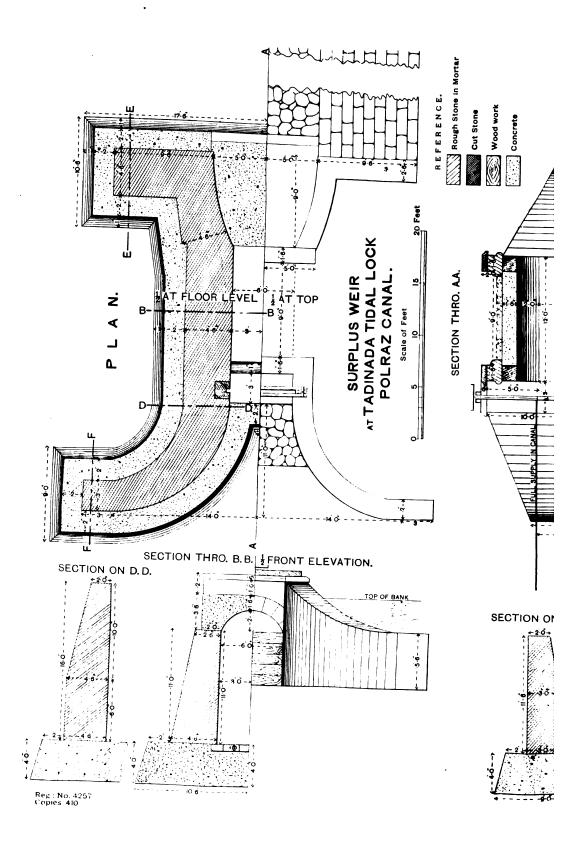


Photo-print., Survey Office, Madras. 1898



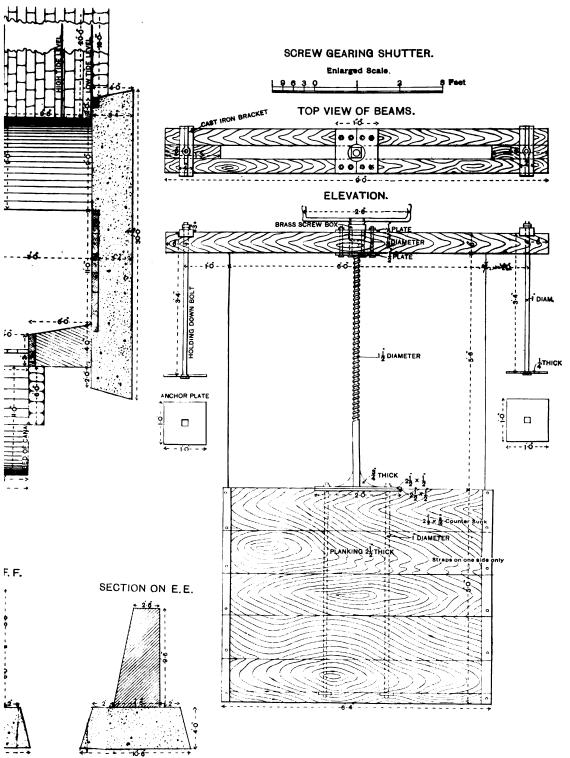
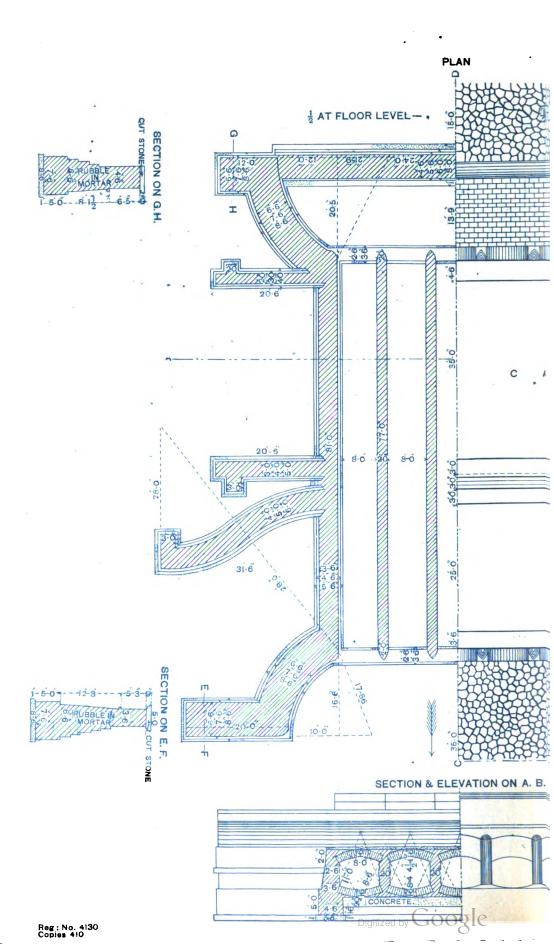
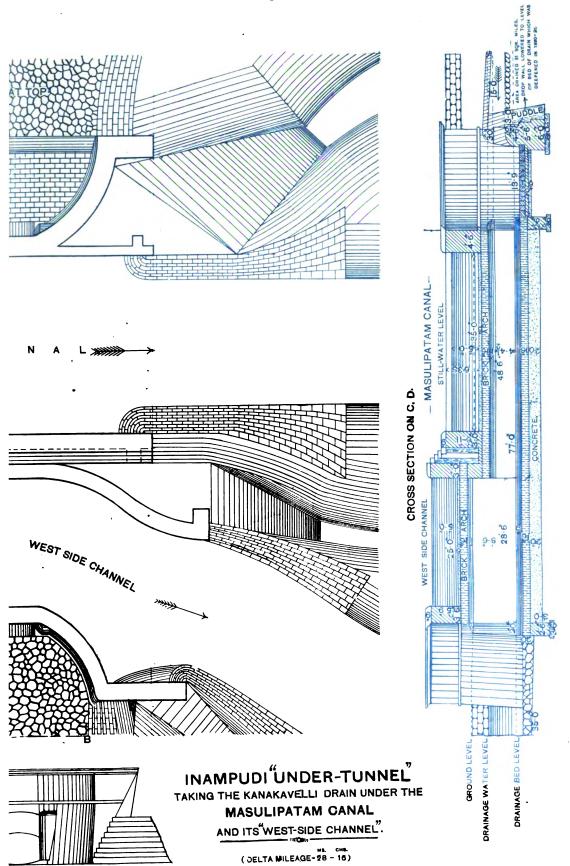
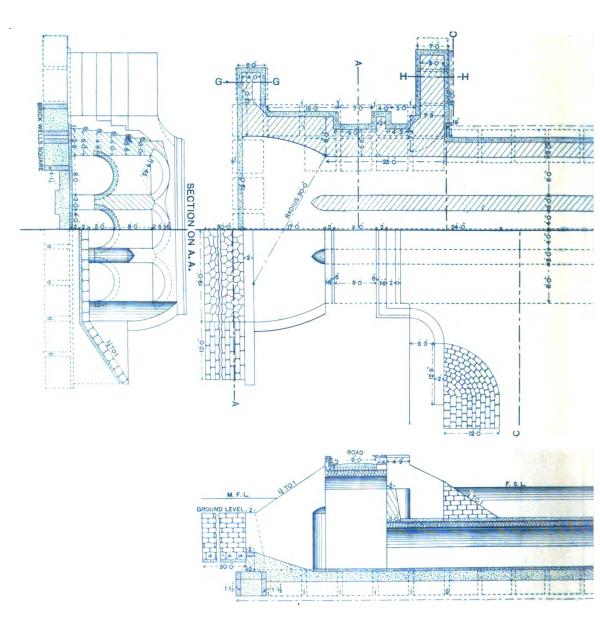


Photo-Print, Survey Office, Magras.

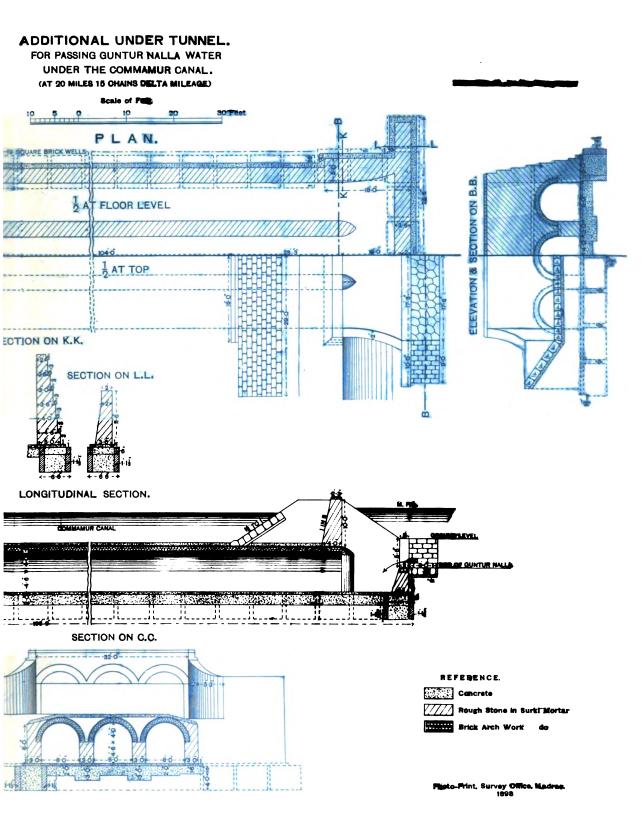


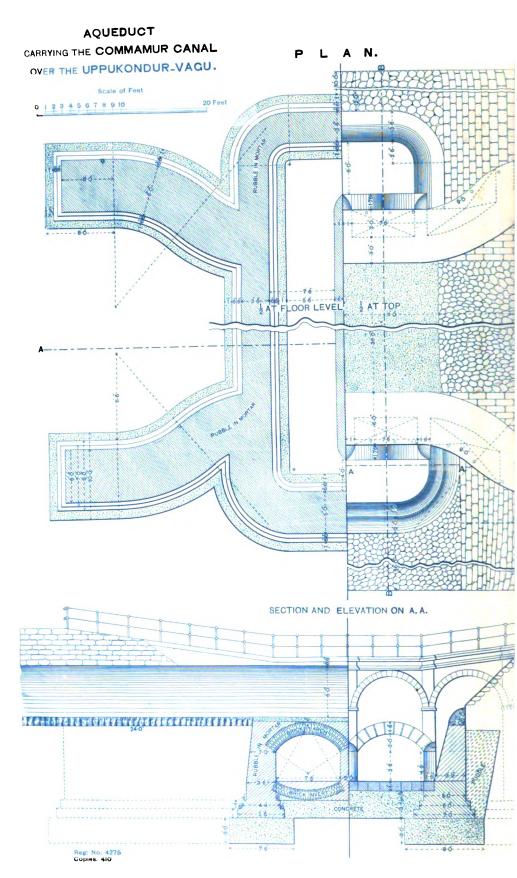




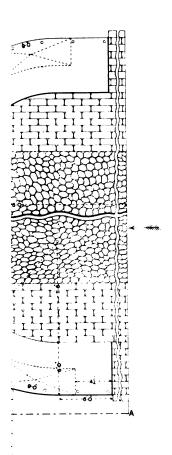
# SECTION ON H.H. SECTION ON G.G.

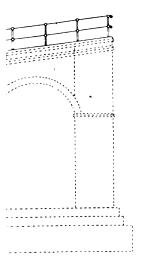
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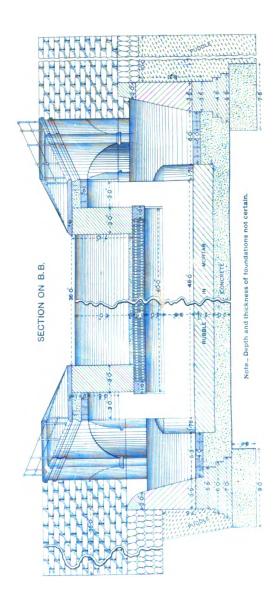
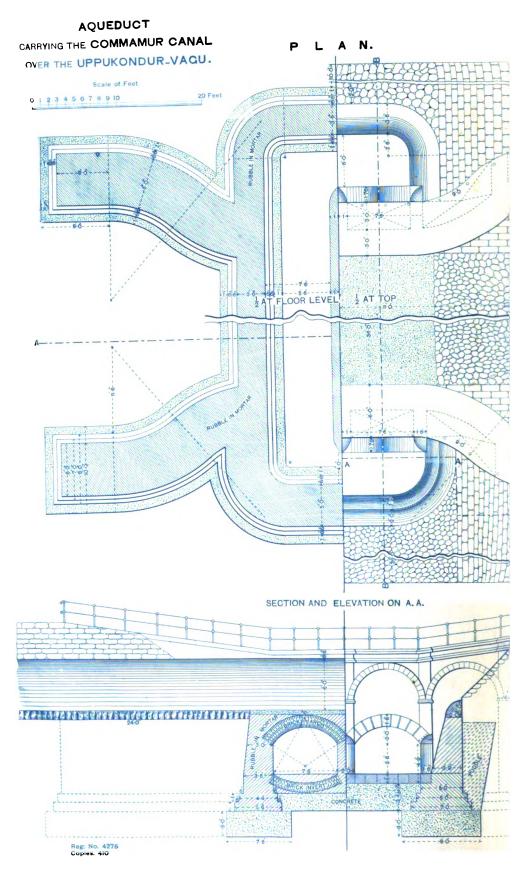
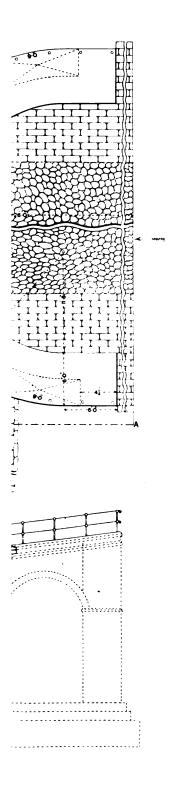


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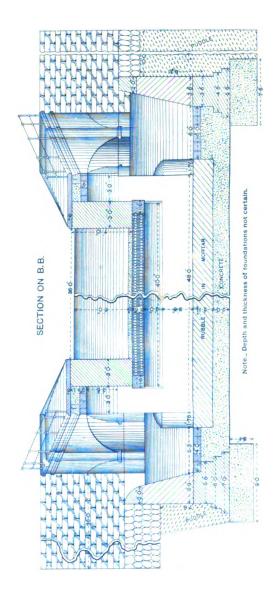
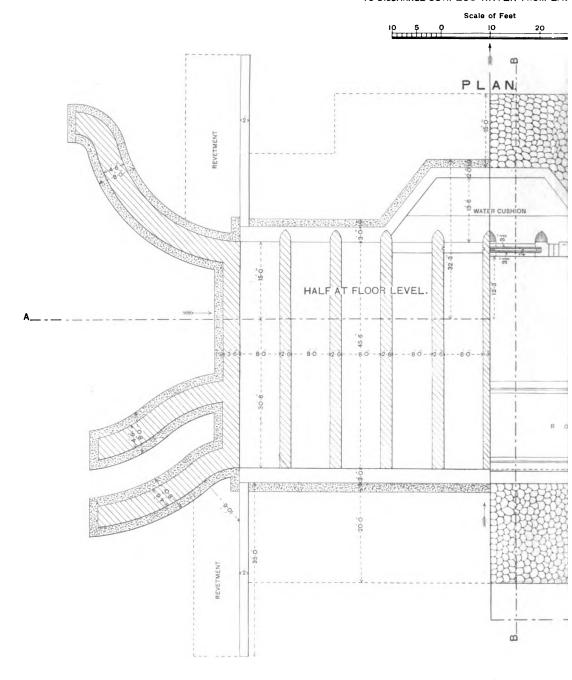


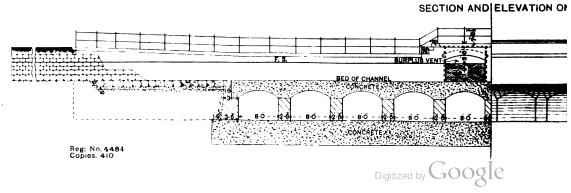
Photo-Print, Survey Office, Madras.

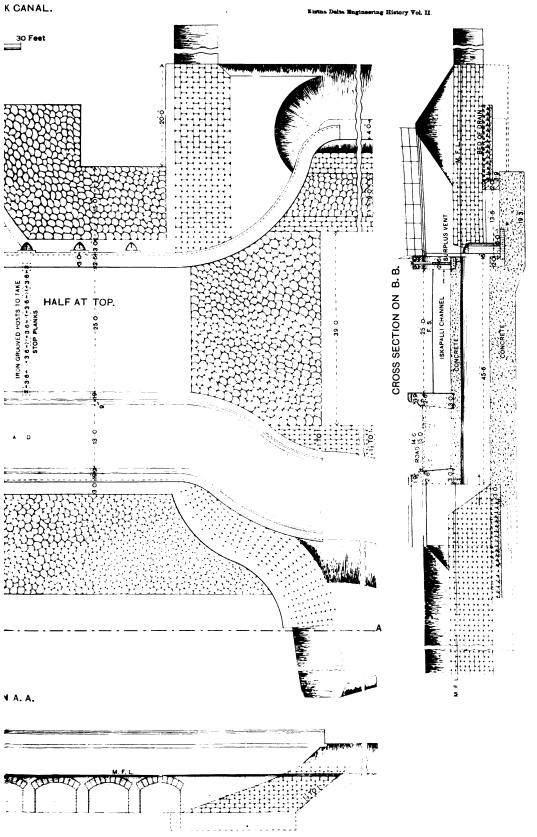
\* <1 . . . .

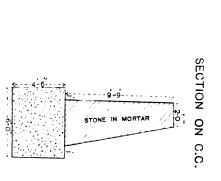
AQUEDUCT
CARRYING ISKAPALLI IRRIGATION CHANNI OVER THE BHATTIPROLE DRAIN WITH TWO VENTS IN SIDE-WALL

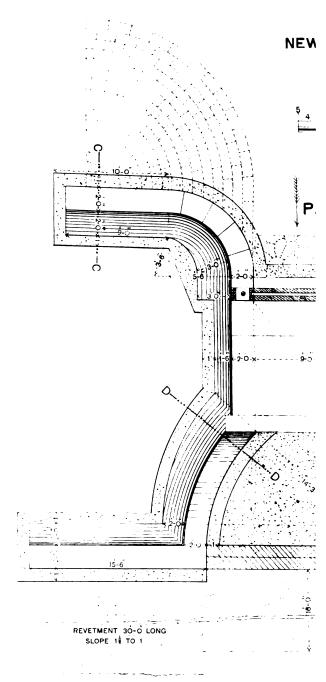
TO DISCHARGE SURPLUS WATER FROM BAIL











## HALF FRONT ELEVATION.

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Copies 410

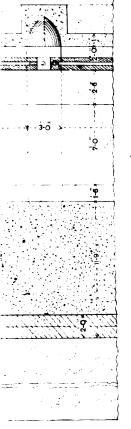
## NALLAMADA SURPLUS SLUICES.

IN LEFT BANK OF COMMAMUR CANAL. ( DELTA MILEAGE 41 MILES 3 CHAINS )

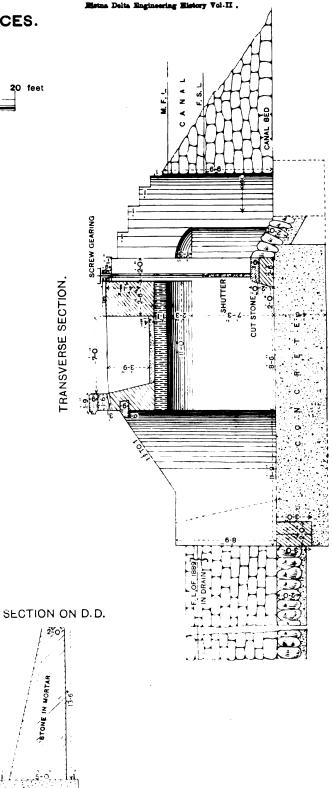


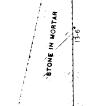
## RT PLAN.





feet

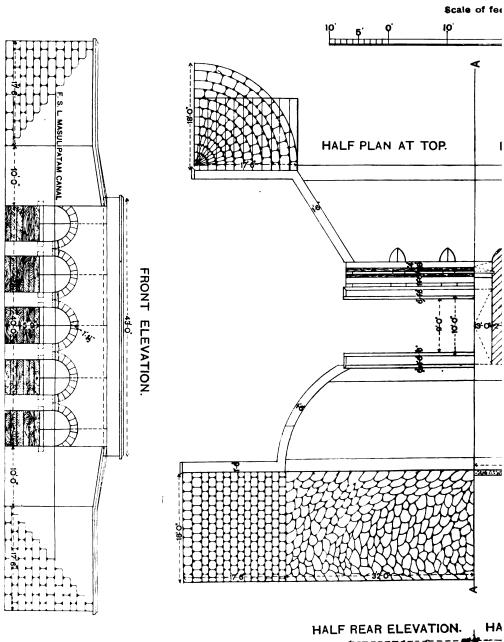


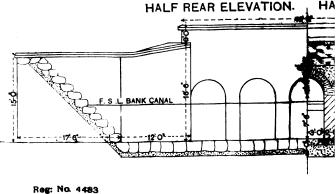


## HEAD SLUICE OF

EASTERN DEI

RIGHT BANK OF MASU





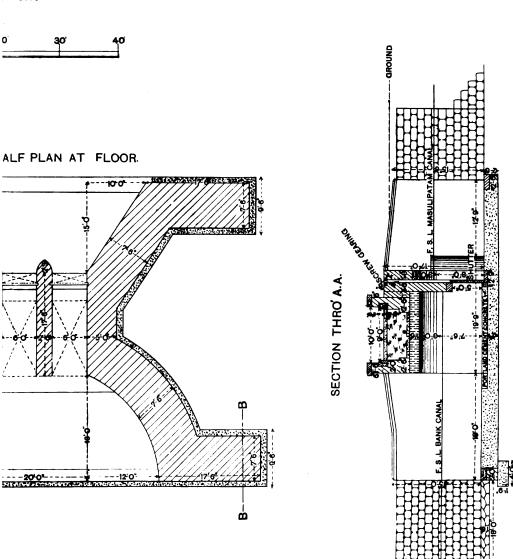
Copies 440.

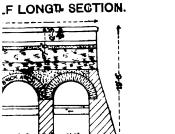
 $\mathsf{Digitized} \; \mathsf{by} \; Google$ 

#### BANK CANAL

ra. JPA**TAM CANAL.** 

Kistna Delta Engineering History Vol II





SECTION THRO B.B.

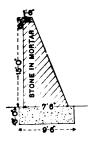
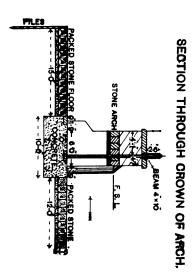
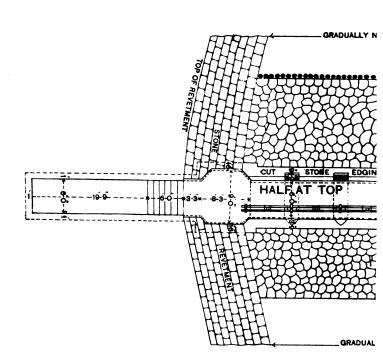


Photo-Print., Survey Office, Madras.

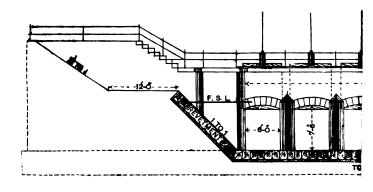
## NEW







## FRONT ELEVATION, (SHUTTERS LIFTED)



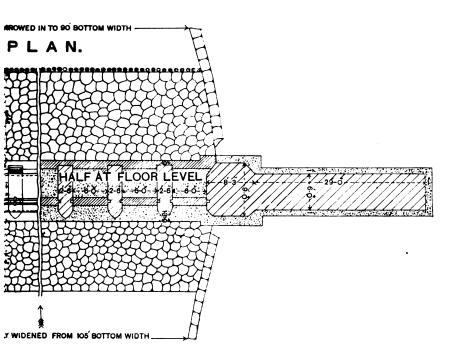
Ma. 432

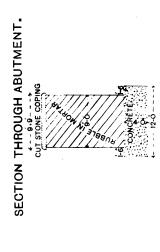
#### REGULATOR

YVES CANAL.

Scale of feet

0 IO 20 Feet





BACK ELEVATION.
(SHUTTERS DOWN)

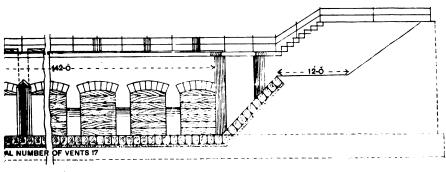
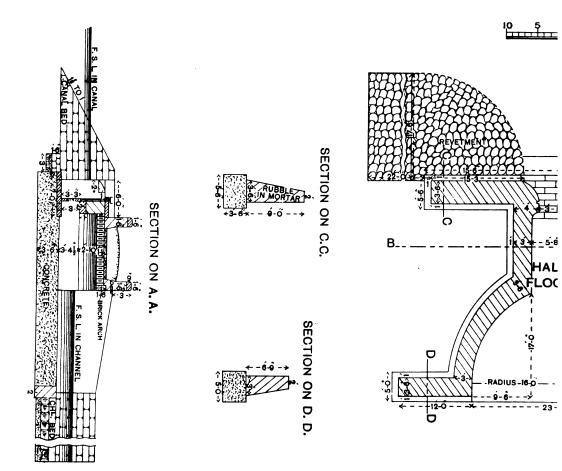
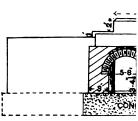


Photo-Print, Survey Office, Magrais 1898

TO ISKA BANK



SECTI



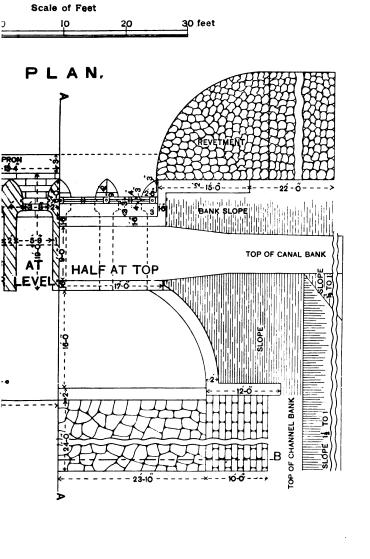
#### HEAD SLUICE

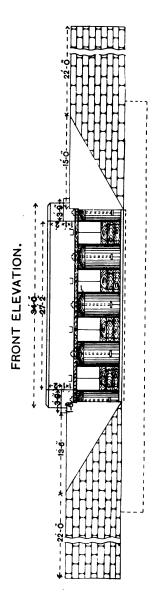
ALLI IRRIGATION CHANNEL.

#### ANAL-WESTERN DELTA.

TO BE IRRIGATED, 15,000 ACRES)

Kistna Delta Engineering History Vol. II





#### IN AND ELEVATION ON B.B.

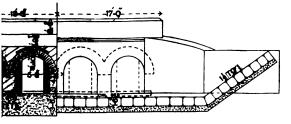
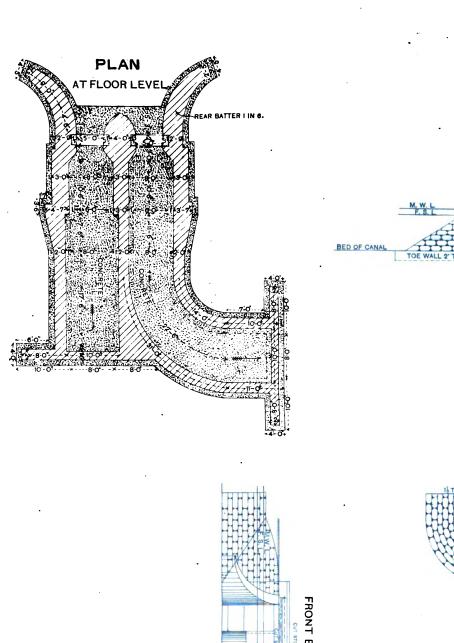


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#### ID SLUICE

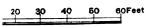
SIDE"&"VARAHAPURAM"
FION CHANNELS.

JAL-WESTERN DELTA.

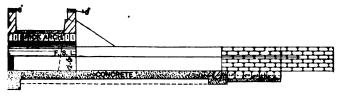
JATED-6,000 AGRES EACH CHANNEL

Ristna Delta Engineering History Vol. II

Scale of Feet



TION ON A.A.

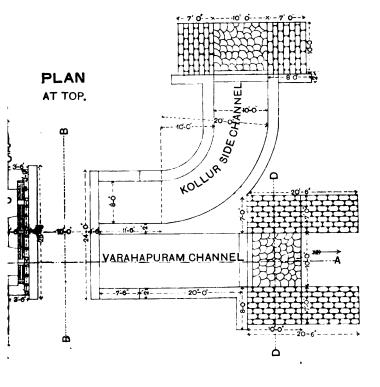


#### CROSS SECTION ON C.C.



CROSS SECTION ON D.D.





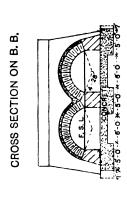


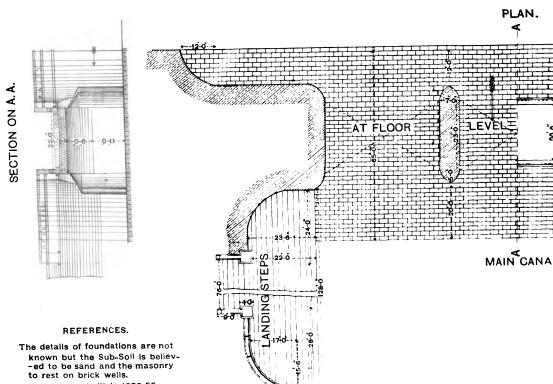
Photo-print., Survey Office, Magras, 1898.

BRIDGE OVER MAIN C

IMMEDIATELY BELOW



RE#



The work was built in 1853-55.

The roadway was raised and new parapets built in 1884.

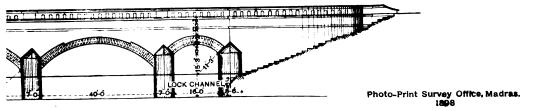
Thickness of wings and abutments not known.

Rough stone in mortar Brick in mortar Brick Arch-work Roughly dressed stone work F. S. L

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NAL EASTERN DELTA EAD SLUICES Kistna Delta Engineering History Vol. II IADA. SECTION ON B. B. AT TOP. 8

ELEVATION.



BRIDGE OVER RYVES CAP BETWEEN HEAD & NEW REGULA PLAN. AT TOP HALF ELEVATION SECTION ON C.D.

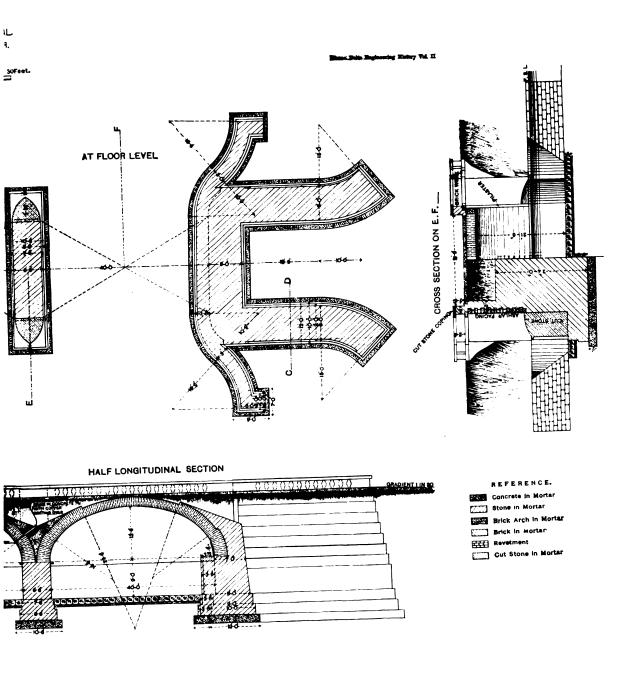
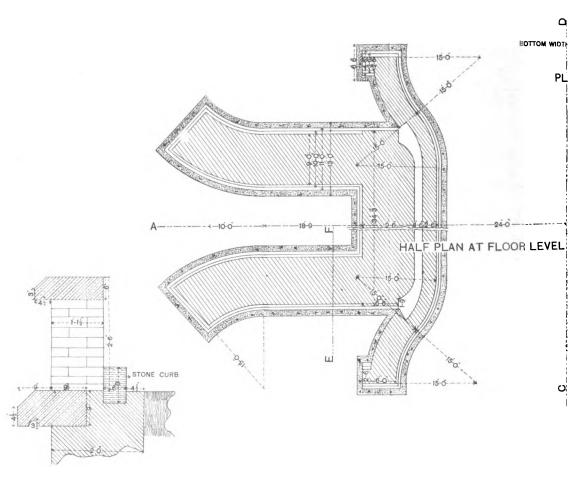


Photo-Print, Survey Office, Madras

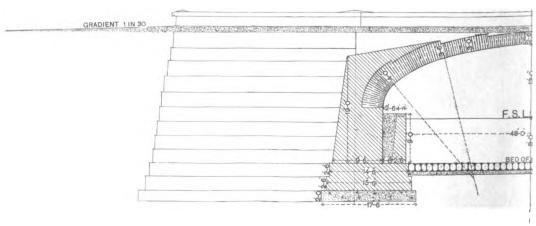
# BRIDGE OVER E



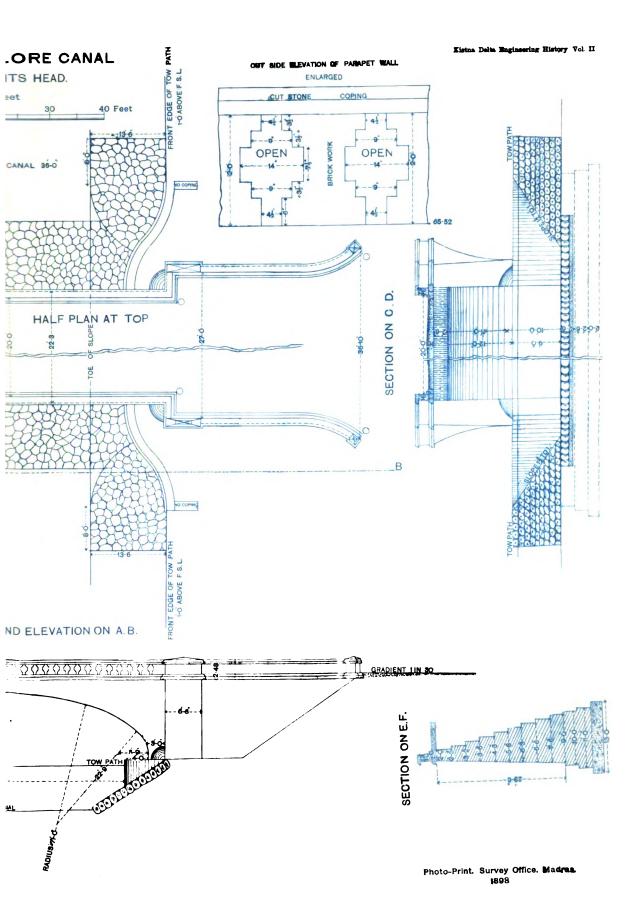


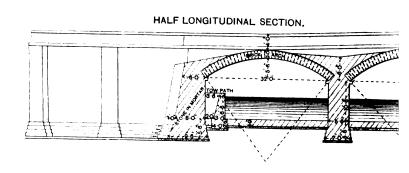
ENLARGED SECTION OF PARAPET.

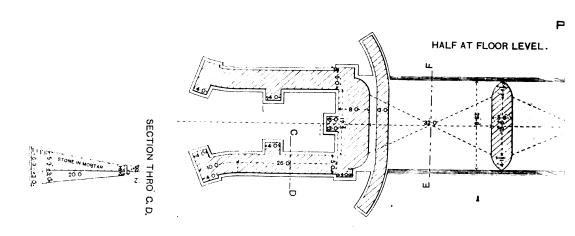
#### LONGITUDINAL SECTION



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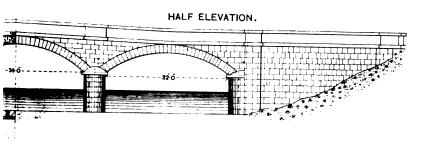
Reg: No. 4450 Copies 410

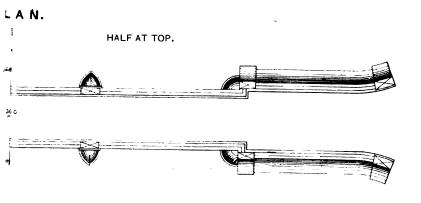
#### LUR BRIDGE.

AMUR CANAL.
GE 15 MILES 9 CHAINS)

20 30 40 Feet

Listna Delta Engineering History Vol. II





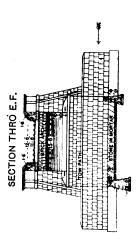
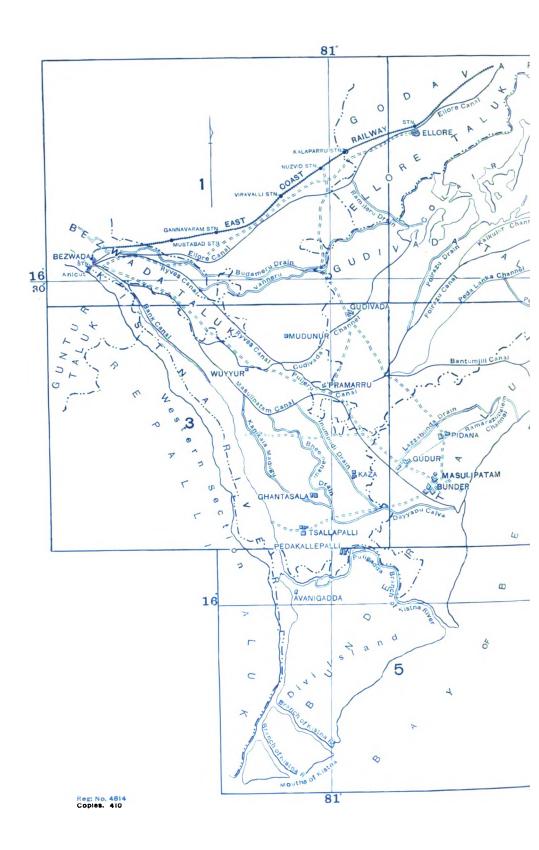
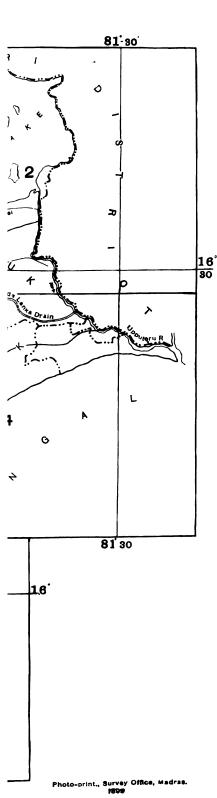


Photo-Print., Survey Office, Madras. 1898





## PLATE 36

# KEY MAP

## KISTNA DELTA

EASTERN SECTION.

male of Miles

0 1 2 8 4 5 Miles

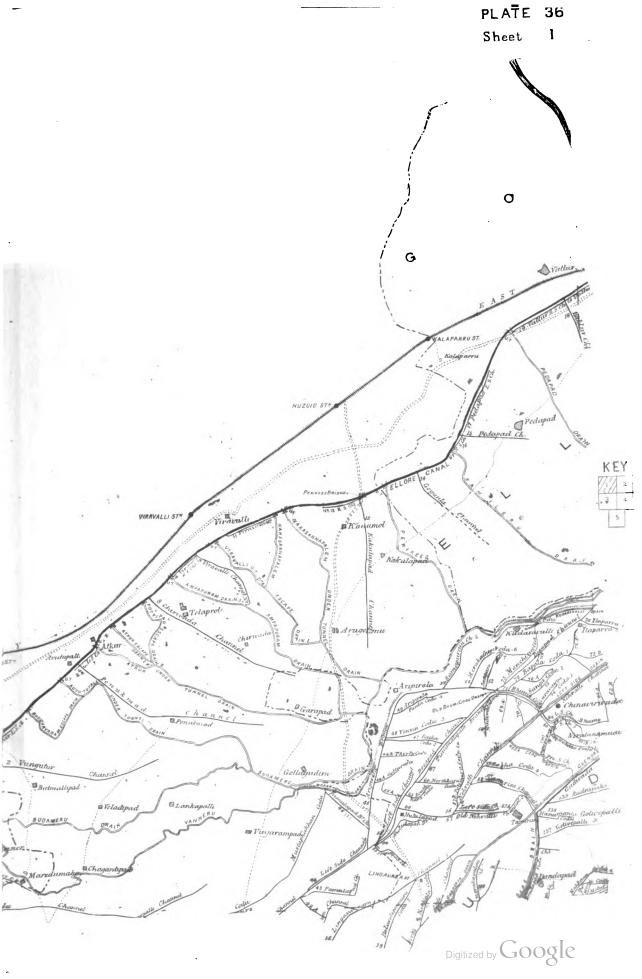
### SKETCH MAP

of the

# KISTNA DELTA

Eastern Section. SCALE OF MILES \_\_ Reference \_ Village Site \_ Main Canal \_ Monnet \_ Proposed Channel \_\_\_\_ Drain \_\_ Proposed Drawn\_ Embankment\_ Trunk Road \_\_ Village Road \_\_ Lock \_ Bridge \_\_ Under Tunnel \_\_\_ Escape \_\_ Wharves declared under canal Act\_BEZWADA USTABAD STE O.Savaragudem

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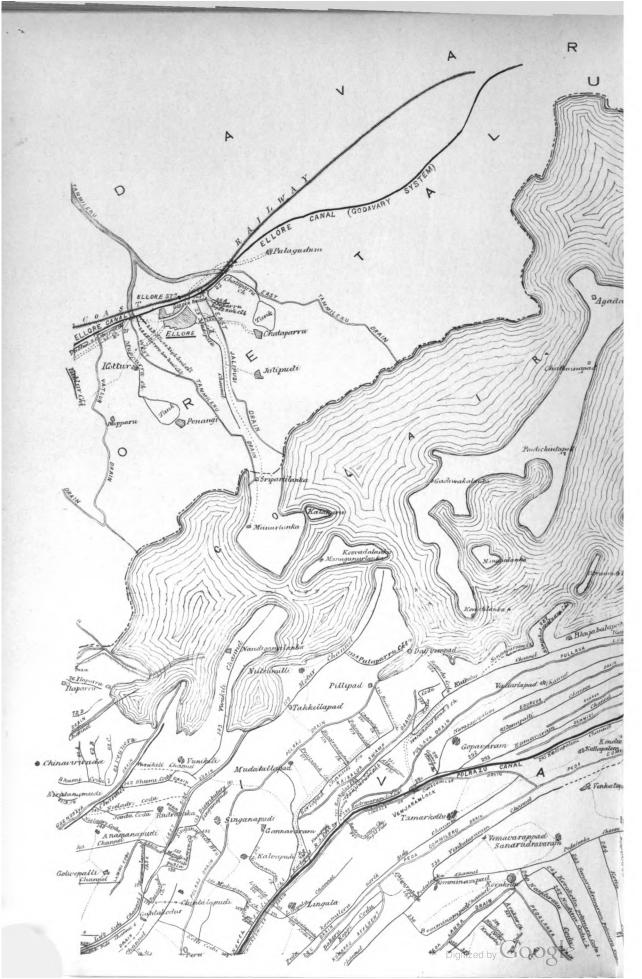
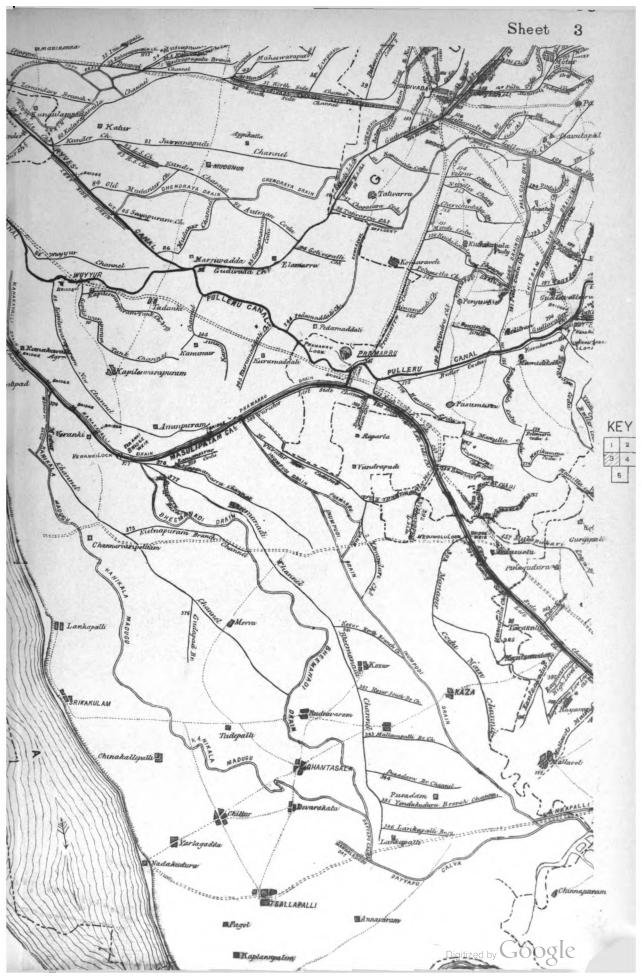
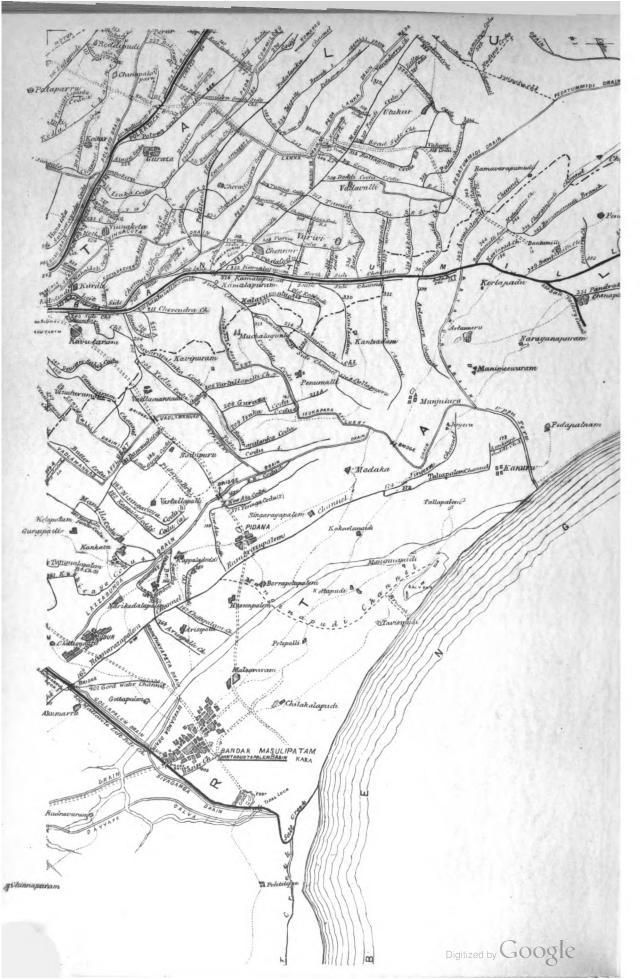
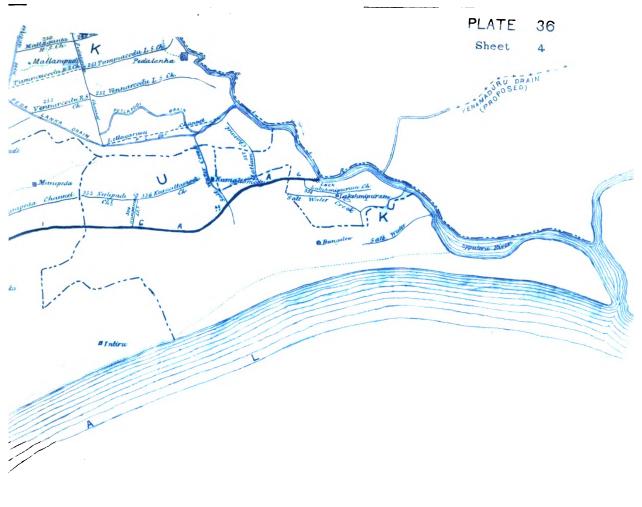


PLATE 36 Sheet **2** . K ഗ റ Digitized by Google

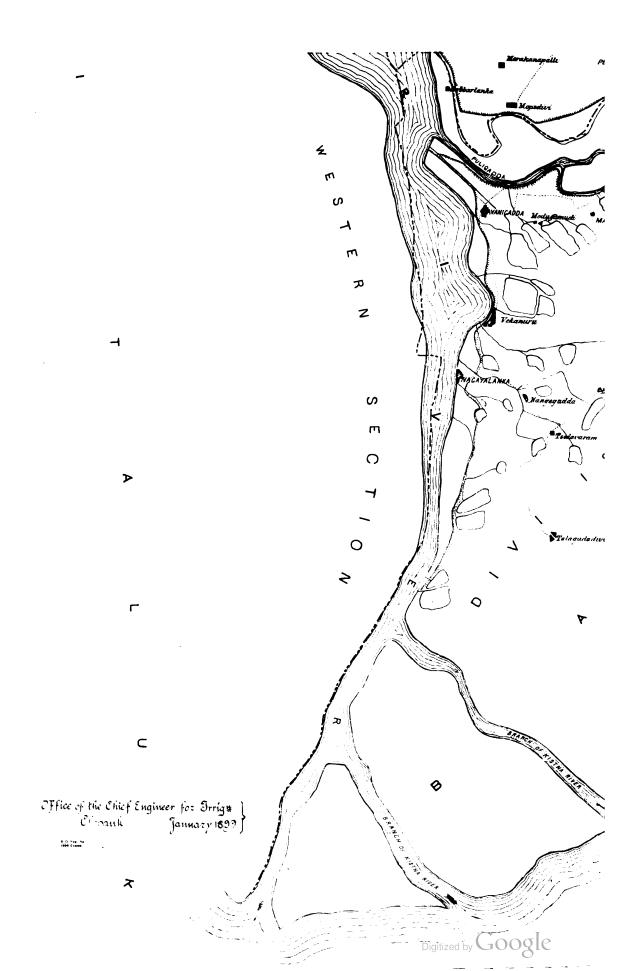


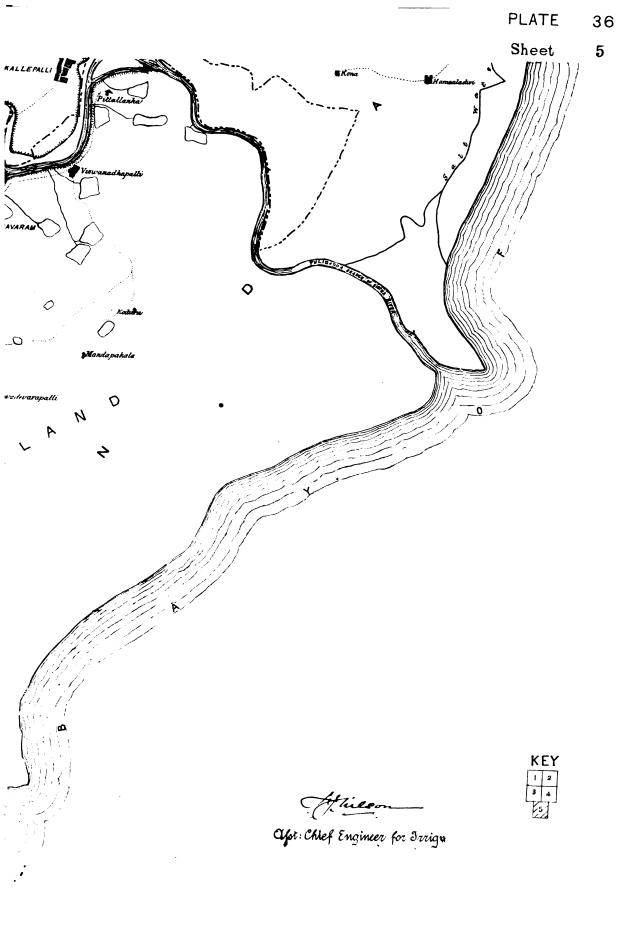






K E Y





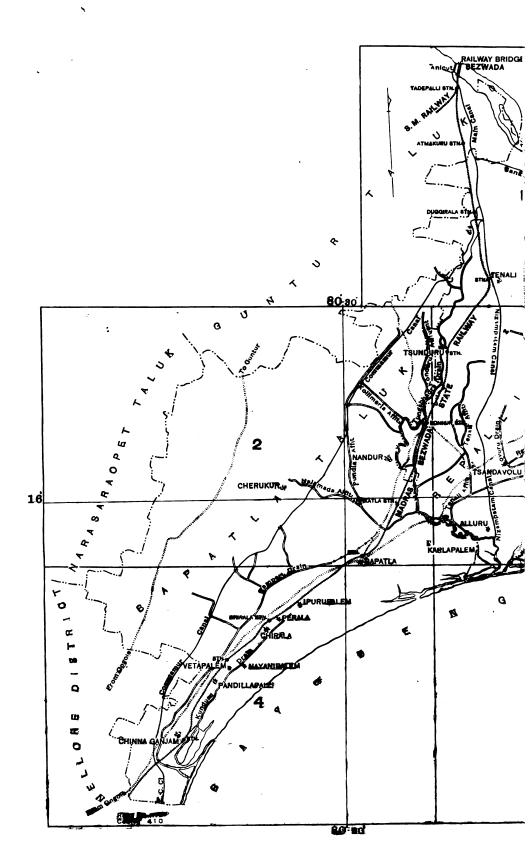
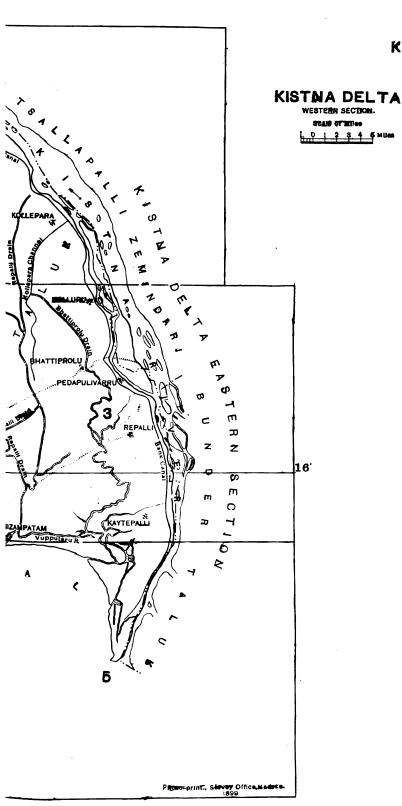
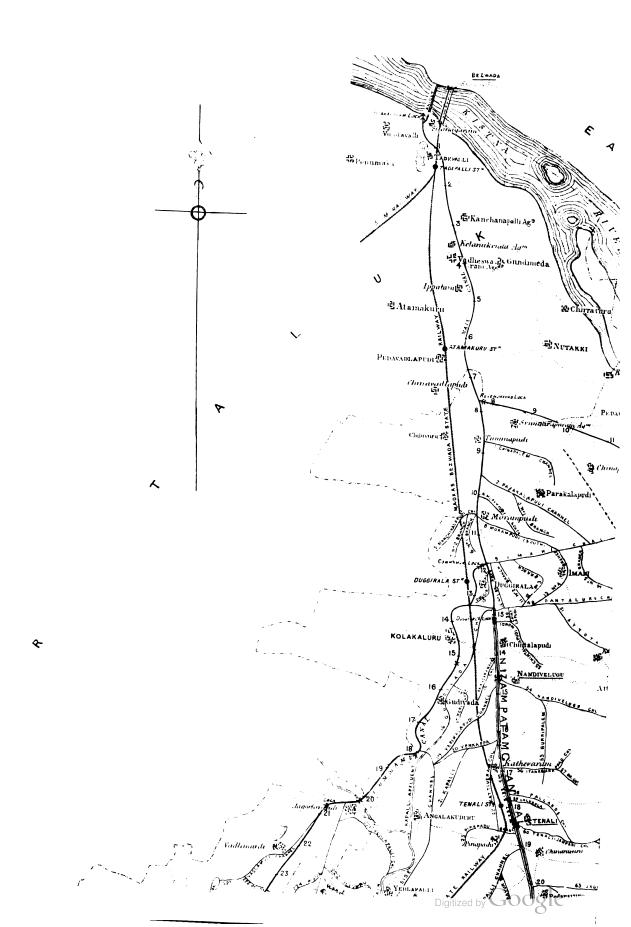


PLATE 87



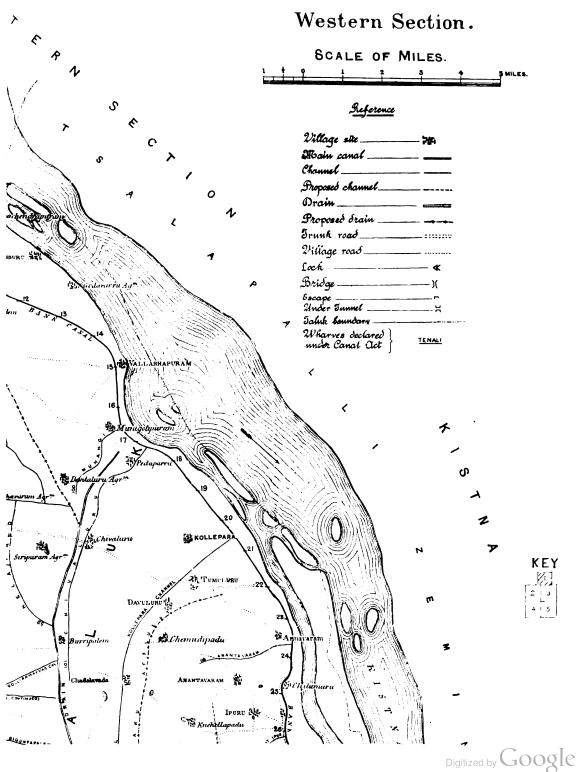


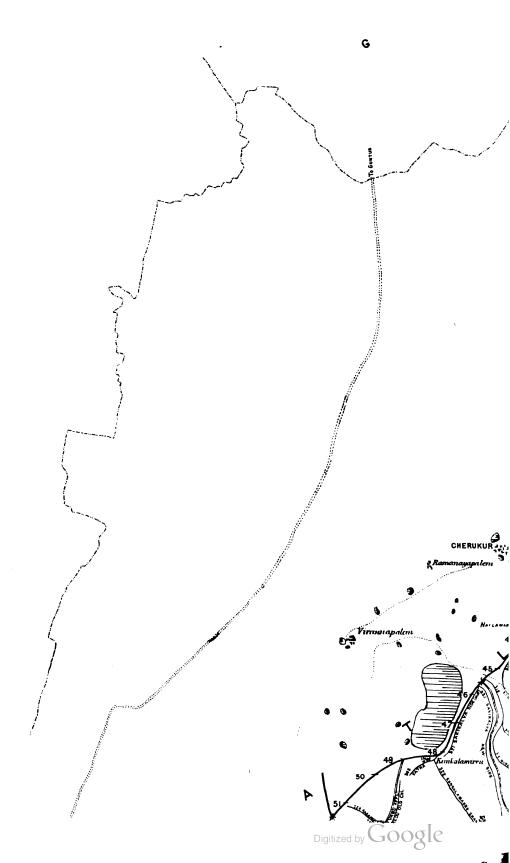
## SKETCH MAP

of the

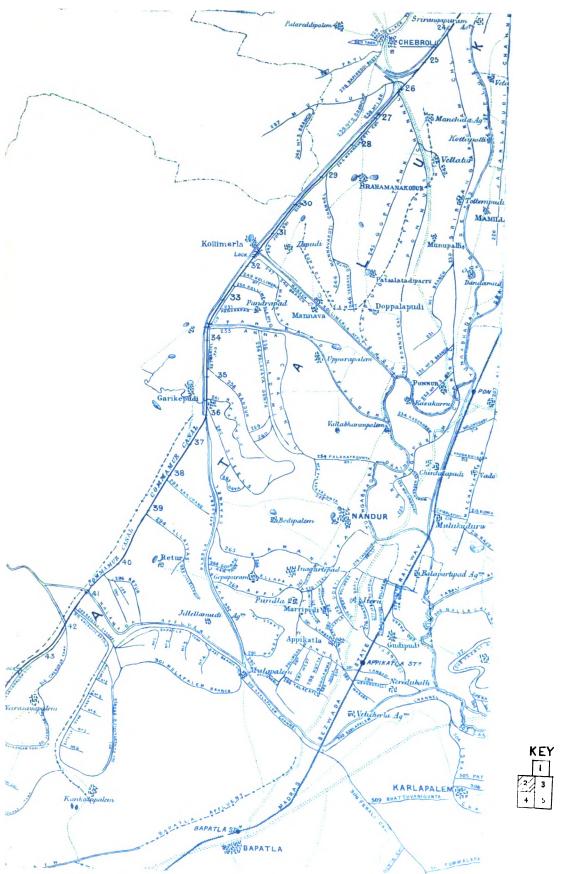
## KISTNA DELTA

Western Section.

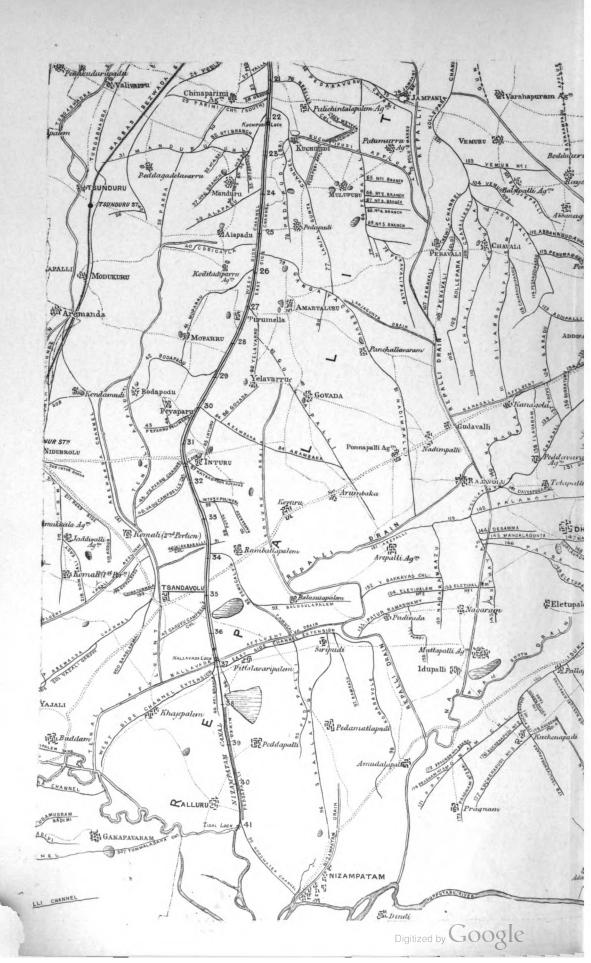


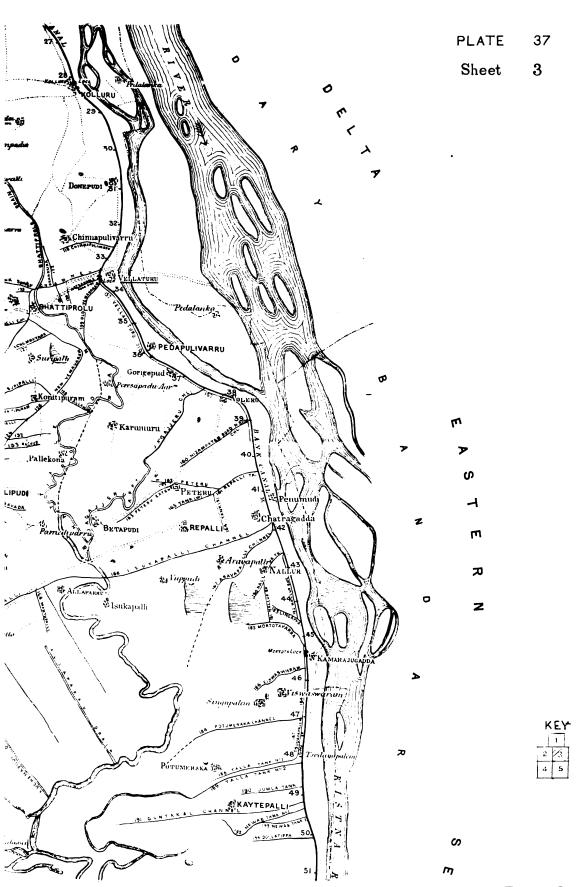


## Sheet 2



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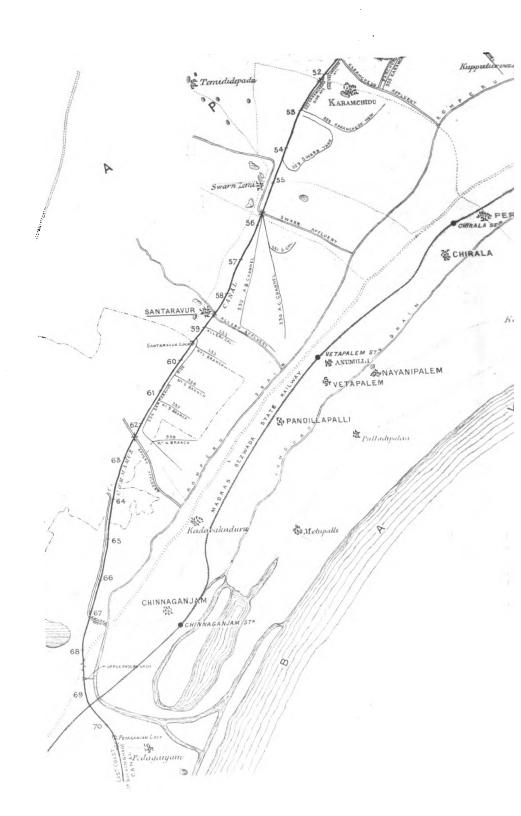
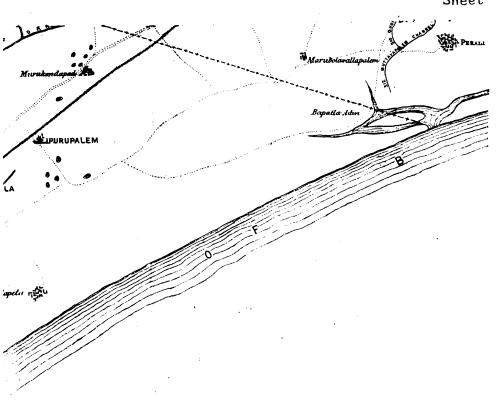
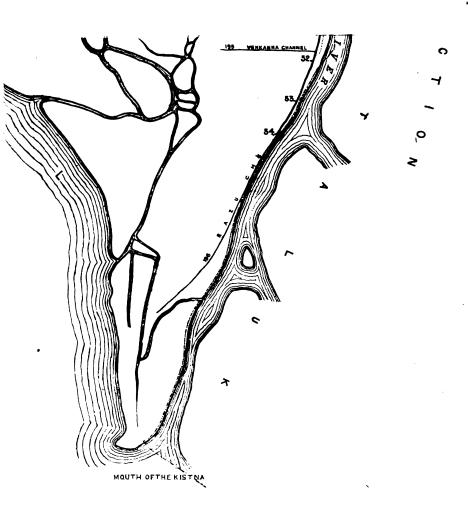


PLATE 37 Sheet 4



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Ofs‡ Chief Engineer for Luig\*

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